DOCUMENT RESUME

ED 353 633 EA 024 408

AUTHOR Hoppe, Patricia Anne
TITLE A Knowledge-Based Expert System Which Assists Non-Profit Organizations in Fund-Raising Software Selections.
PUB DATE Jun 92
NOTE 149p.; M.S. Exit Project, University of Oregon.
PUB TYPE Reports - Research/Technical (143) -- Dissertations/Theses - Masters Theses (042)

EDRS PRICE MF01/PC06 Plus Postage.
DESCRIPTORS Computer Software; *Computer Software Development; *Computer Software Selection; Database Management Systems; Elementary Secondary Education; *Expert Systems; *Fund Raising; *Nonprofit Organizations

ABSTRACT

Outcomes of a project designed to develop the knowledge base necessary for creating an expert system that would help nonprofit organizations select fund-raising software are presented in this paper. When the system is completed, its components will ask the user for information that will assist in determining the organization's administrative needs and will then make recommendations for the software most appropriate for meeting that organization's fund-raising needs. The project involved two separate studies, called respectively, the "Laboratory Study" and the "After Study." The first phase of the laboratory study developed a model query system based on the developer's personal knowledge. The second phase involved a literature review focused on software selection and fundraising software. During the after study, personal interviews were conducted with a total of three representatives: one each from a small, medium, and large organization. Telephone interviews were conducted with nine representatives: three each from a small, medium, and large organization. The after study expert system that was designed following field research incorporated the information gathered in the previous stages but added several more software features for incorporation into the query component. In summary, the after study model differed from the laboratory model in the following ways: it has more software features; the size of the organization is not considered in the queries; references have been placed in the software database; and organizational objectives are determined before using the query system. Appendices contain the laboratory induction table and expert system; a list of United Way agencies and the associated annual budget; a list of questionnaire features; interview questions; a review of fund-raising software and their features; records of the field structure of the software features database and software description database; and the expert system code and dialog. A list giving definitions of terms is also included. (Contains 13 references.) (LMI)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED353633

A KNOWLEDGE-BASED EXPERT SYSTEM WHICH ASSISTS NON-PROFIT ORGANIZATIONS IN FUND-RAISING SOFTWARE SELECTIONS

by

Patricia Anne Hoppe

EXIT PROJECT

Presented to the Interdisciplinary Studies:
Applied Information Management
and the Graduate School of the University of Oregon
in partial fulfillment of the requirements
for the degree of
Master of Science

June 1992

EA 024 408

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

This document has been reproduced as received from the person or organization originating it.

Minor changes have been made to improve reproduction quality.

Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

P. Hoppe

BEST COPY AVAILABLE

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Approved: Alan Eliason

Dr. Alan Eliason

Linda Ettinger

Dr. Linda Ettinger

Table of Contents

Introduction, Goals and Objectives 1
Statement of Problem 1
Purpose of the Research 2
Background to the Problem 4
Significance of the Project 6
Expectations - Hypothesis 7

The Laboratory Study 8

Search of the Literature 11
The Process of Software Selection 11
Fund-Raising Software - Manufacturers' Information 17

The After Study 23
Structure of the Study 23
Conducting the Study 25
Results of the Data Collected 27
Summary of Interviews 37
Building the Expert System for Software Selection 43

Conclusion 47
Summary 47
Future Projects and Research 51

Appendix 53
A. Laboratory Study Induction Table 54
B. Laboratory Study Expert System 55
C. United Way Agencies and Associated Annual Budget 63
D. List of Features of Fund-raising Software Questionnaire 66
E. Interview Questions 67
F. Review of Fund-Raising Software and Their Features 68
G. Field Structure of the Software Features Database 69
H. Field Structure of the Software Description Database 77
I. Expert System Code 85
J. Expert System Dialog 98

Definition of Terms 133

Bibliography 136

Introduction, Goals and Objectives

Statement of Problem

With desktop computer systems becoming a must to run any business or organization, non-profit organizations are also finding it necessary to acquire personal computer (PC) systems. In order for non-profits to maintain their organization, extensive amounts of data concerning donors, volunteers and fund raising needs to be managed. The manual method (the alternative to the computer) is paper records. This may consist of lists, piles of paper, ledgers and files of 3 x 5 cards. The data search consists of someone looking through piles of paper or files of cards. In the past this was the only method available and it led to problems. For example, as stated by Sandler (1987, p. 103), there is "no way to determine how much a donor had given over a lifetime or in a particular year, except manually adding up all the individual donations." Today, many non-profit organizations continue to manage their donor information in this way.

Presently there are three common ways in which a non-profit organization can handle the software selection process. First, gathering information about what software packages other non-profits have and how they are being used is a common method of selection. Another method of selection is to read all the literature available in order to become educated about what has been developed. The third method is to seek the help of a software salesperson or hire a consultant and let them diagnose a solution for the specific needs. According to Marijo Mead (1991), Development Director of the Portland YWCA, any one method or a combination of methods is the approach taken by the majority of non-profits seeking software.

Purpose of the Research

The purpose of this final project is to develop the knowledge-base necessary to create an expert system which would assist in the fund-raising software selection process for non-profit organizations. The components of this future expert system will consist of query questions for the user and a sampling of software recommendations. In its finished form, this expert system will query the user, asking for information that will assist in determining an organization's administrative needs. After obtaining this information the system will give recommendations as to which software would best fit that particular organization's fund-raising needs.

In the process of creating this system, a comparison will be made of an earlier laboratory study conducted and the current or "after" study. The laboratory (or "before") study was conducted with little more than personal experience on the part of the designer. It is thought that through the research of literature and non-profit organizations, an expert system can be developed that can, and will, be used in the "real" world.

The product of this final project consists of two parts - a knowledge-base and a model of an expert system for the software selection process. The difference between these two parts can be explained as follows:

1. The knowledge base is comprised of descriptive facts and domain expertise and contains the instructions or rules on how the facts are to be used (Liebowitz, 1990, p. 54). In order to create this knowledge-base it is necessary to perform part of the knowledge engineering process. One methodology of knowledge engineering was devised by Mattimore and Plant and explained by Liebowitz. The two components of this methodology dealing with the building of a knowledge base are knowledge elicitation and knowledge acquisition (Liebowitz, 1990, p. 254). Knowledge elicitation is the "process whereby the knowledge is extracted purely from the domain expert without any

analysis" (Liebowitz, 1990, p. 254). Knowledge acquisition is considered to be the analysis of that knowledge derived during the elicitation process (Liebowitz, 1990, p. 255). Both these processes create the foundation for a successful and useful expert system. Other components of expert system creation, according to Mattimore and Plant, are concerned with the initial specifications, knowledge representation and implementation.

2. The model is a prototype system which is used to reason using uncertain data and determine results based on the rules from the knowledge base. The model expert system will be designed to query the user about their need for specific fund-raising features. The system will then be able to give hypothetical recommendations for software systems based on a best fit for that particular organization's needs. Software information will be derived from actual software packages available. Since this is a prototype, all portions of the system will not be complete. In order to give an idea of how a completed system will look, one specific area, mailing lists, will be taken and expanded upon in the query process.

Background to the Problem

Within fund-raising there are four major areas which produce dollars for the non-profit. Marijo Mead (1991), YWCA Development Director, describes them as foundations, planned giving, annual campaign, and marketing. Each area uses the computer as a tool, some more than others, such as the annual campaign. The annual campaign encompasses individual solicitation and special events. Adams-Chau (1988, p. 19) states that over 89% of contributions come from individuals and it is therefore monumental to be able to keep statistics on this valuable resource of donations. Individuals give the greatest amount because of one principle - "People give to people (Adams-Chau, 1988, p. 19). It takes years to build a strong support base and a computer is an efficient method to organize the information that makes up this base. Among the methods of individual solicitation, "mail solicitations are second only to personal contact by acquaintances as the most effective fund raising techniques" (Adams-Chau, 1988, p. 31). Organizations use fund-raising letters not only to solicit, but to build a constituency of individual donors. Gurin (1989, p. 117) contends that direct mail will continue to expand. In addition, the computer usage will also continue to increase. The reason is because the computer "will make it easier and more efficient for organizations to store and retrieve information on their donors, use this information to select prospects for special appeals, personalize printed form letters, and eliminate duplicate names from new donor acquisition lists" (Gurin, 1989, p. 117). Because of this intense need for computer support, the software required to manage this data is essential to the non-profit organization.

According to Gurin (1989, p. 109), computers are commonly recognized as an important tool for fund-raising. Among ways a computer can help are: "information on prospects are stored and rapidly retrieved in a number of desirable arrangements (such as by age, status, sex, or size of gift); and computerized mailings for certain groups of

prospects and donors provide a more effective and economical method of raising funds by mail" (Gurin, 1989, p. 109). The computer makes it easier and more efficient for organizations to store and retrieve information on their donors. They are able to use this information to select prospects for special appeals, personalize letters and manage donor lists (Gurin, 1989, p. 117). A computer will not just automate what an organization does today, it will give them access to all sorts of tools to do the job they are trying to do (Walton, 1990, p. 28).

More and more non-profit organizations are developing computer systems, a critical need becomes the correct selection of software which will make their work more efficient and effective. They have a need for donor tracking, contribution tracking, and fund-raising software packages and because there is usually no specific person trained and responsible for computer operations, the software selection task becomes overwhelming. Software for non-profits is relatively new and with little information available it is a scary prospect for these small organizations to embark on the selection process. The software purchase will effect the organization for years and so the best possible decisions need to be made.

Significance of the Project

The knowledge-base created in this project will be developed into an expert system. The research accomplished in this project is the methodology followed in creating an efficient query system. Without the knowledge-base, a system could not be effectively built. The knowledge and subsequent expert system, are significant. As discussed earlier, non-profit organizations can afford little or no personnel with computer expertise. Therefore, they must rely on other methods and sources for their software decisions. The clearer the organization is at defining their precise needs, the less problems they will have with the purchase (Walton, 1990, p. 28). This future expert system will give the user software recommendations that will satisfy the organization's needs. The knowledge from a variety of sources, i.e., literature, vendors, consultants, etc..., will be gleaned and applied to the creation of the expert system. No longer will an organization have to spend an exorbitant amount of time to determine what fund-raising software packages might be appropriate.

Expectations - Hypothesis

The research for this project was designed to determine if data which was used to create an expert system in the "laboratory" is appropriate for creating an expert system in the "real" world. In the laboratory, a model query system was developed and used as a means for assisting non-profit organizations in the process of selecting software for their organization. The information important to the design of the system was taken from the author's personal experience with non-profits and fund-raising groups. Since I had not actually used such software, I could be described as a naive user. I also relied upon my experience as a computer analyst to determine logical steps and processes that an organization would need to accomplish when selecting software. From all of this, I created an induction table and subsequent model expert system.

In contrast to using a naive approach in creating a knowledge-base and expert system, this study includes field research to show how a non-profit organization should go about selecting software and what functions fund-raising software systems perform. From these results, a revised model query system is designed to assist an organization in the software selection process.

It was my belief that after doing the research I would have discovered that there are many more facets to fund-raising software than previously thought. I anticipated that the process to select software would be more encompassing and detailed. I also believed that the knowledge gained could be used to create an expert system model which will later be developed into a full system to be used by non-profit organizations.

The Laboratory Study

This chapter discusses the process and development of the initial laboratory work done to simulate a software selection expert system. The design prototype did not have the benefit of field research. It was based on the knowledge of the system developer.

In this laboratory study there was a detailing of how non-profit organizations handle the software selection process. The methods discussed included gathering information about software packages, talking with other non-profit organizations about their software, and using the advice of the salesperson or vendor. The laboratory study implied that these processes can be replaced by using an expert system that would query the user and then give recommendations based upon the answers given.

To begin the development of the expert system, features of software packages were determined. Identifying these features was necessary so that queries could be made of the user to determine their needs. This information was acquired by using software reviews and the knowledge of the system developer. Six features were determined to be needed by these organizations. These features were:

- letter writing
- reports
- desktop publishing
- word processing
- mailing lists
- fund-raising.

In addition to these features, it was necessary to inquire about the size of the organization and the type of computer that was to be used, whether it be IBM compatible or a MacIntosh.

Once it was determined what types of information were needed for the selection process, an expert system was created. This was done is five steps.

The first step was to create an induction table (Appendix A) to make sure the process was possible. This gave an abbreviated picture of what the system could look like and provided a foundation for further thinking and development.

Next, questions were developed for the system queries. These questions would be used to determine the user's needs. The questions were basic, such as "Is word processing a feature needed at your organization?" Because this system was a beginning prototype, questions were kept simple. It was recognized that in "real life" there would be a need for more detailed inquiry for each feature to provide a more accurate answer.

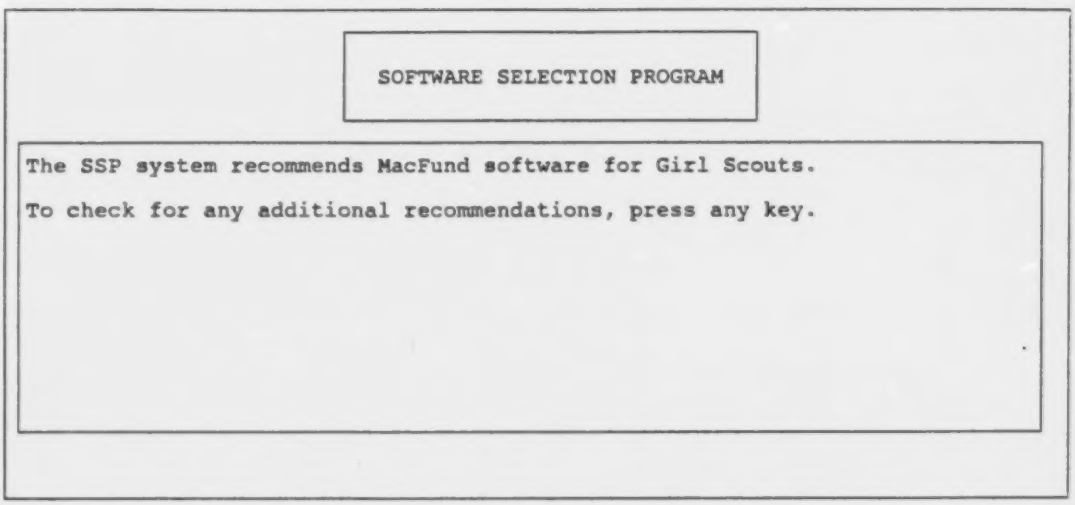
After the questions were written, the physical system was developed. The system consisted of an expert system which queries the user, asking questions pertaining to the needs and software requirements of the specific non-profit organization. The system was made to be user-friendly, not dry and impersonal. This system can be seen in its entirety in Appendix B.

The next step involved creating a database that contained information about the software. Based on the answers to those questions software was selected from this database by matching these requirements to the software specifications. A screen is then displayed showing a software package that is recommended. If there is more than one recommendation, then the system prompts the user to continue. This recommendation screen can be seen in Figure 1.

As with all system development, the creation of this system went through the iterative process of coding and testing.

Figure 1

Recommendation Screen from the Laboratory Study


SOFTWARE SELECTION PROGRAM
The SSP system recommends MacFund software for Girl Scouts.
To check for any additional recommendations, press any key.

Search of the Literature

The Process of Software Selection

In order for a non-profit organization to choose a software package (which will give them exactly what they need to operate their development process more efficiently, effectively and profitably) there are some steps that need to happen. "It is absolutely essential that the purchaser take a proactive role in speaking to the various vendors and seeing what products are out there" (Walton, 1990, p. 30).

First, the organization must "develop a complete and reasonable set of objectives" (Love, 1988, p. 48). In this process they must know the needs and capabilities of the organization and "thoroughly assess the market" (Walton, 1990, p. 26). Walton also states that "the clearer you are at defining your precise needs, the less problems you will have with the purchase" (Walton, 1990, p. 28).

To begin the process of defining the objectives, the current job descriptions and goals of the development process must be addressed. In addition, the goals of the superiors and the staff should be considered. They need to ask themselves some basic questions. For example: Do you need to do mailings? What kind of mailings would these be? Is is necessary to keep lots of detail on donations? Do you wish to write thank-you letters? At the same time existing problems and frustrations that need to be eliminated should be reviewed. Love explains that this will not only assist in the software selection process, but "provide a tremendous side effect: pride and a sense of ownership of your new system" (Love, 1988, p. 48).

After a set of objectives is created, they must be refined and ranked as to their importance. At the very least they should be turned into a "list of required and would-like-to-have functions" (Proffitt, 1985, p. 63). Love and Proffitt both agree that

the organization needs to understand that most likely every objective will not be able to be met by any software package.

Next, it is necessary to get descriptive information about functions that are available on fund-raising software. One way to accomplish this is to obtain the information from a number of vendors. Keep in mind that they will only tell what the system can do, not what it can't. Another way to compile information on software packages is to talk with other development offices. "See what programs similar organizations have used to manage their money, what the program software can do, what problems they encountered" (Jones, 1988, p. 61). This process will give the organization a feel for what is available and how it is being used by others.

Once these steps have been completed, a set of guidelines must be established in order to evaluate the vendors and their products. This set becomes a valuable checklist when it comes time to make software decisions. Love discusses this checklist and suggests the following questions be included:

- What fields of information are necessary to fulfill the objectives?
- What information about each function or transaction performed is kept and for what time period?
- How is information entered and checked?
- What type of help and prompting is available throughout?
- What interfaces to other system or departments (i.e. accounting, mail service bureaus, word processing and publishing) are needed (Love, 1988, p. 50)?

Preparation for vendors' demonstrations is an important factor in this process. In addition to a checklist being created, a packet of samples should be available and an evaluation form to be completed after each demonstration.

The sample packet the organization creates is used to inform the vendor of the type of activities the organization does today and what they wish the new system to accomplish. This packet would include "samples of typical gift and pledge transaction entries; sample files (either existing or rough drafts of what is to be included in each record); sample letters, receipts and reminder formats; and samples of needed reports (both existing and outlines of those which they would like to see)" (Love, 1988, p. 48). This packet will be used to help select vendors and then assist in a hands-on demonstration. During the demonstration, the vendor will need to show how the system will meet the list of needs and create products like in the sample packet (Proffitt, 1985, p. 63).

An evaluation form is a tool that allows for clarification of a vendors presentation and a review of all vendors when the final software decision needs to be made. This evaluation form is to be designed by the non-profit organization and completed during the demonstration. After the demonstration is completed the vendor is asked to review the answers. With questionable areas, the vendor needs to be told of them and asked if they can be addressed. There may have been misunderstandings or not the right questions asked. Questionable areas must be cleared up "because there may be things the system will do that didn't get covered" (Proffitt, 1985, p. 63).

Love stresses the importance of accomplishing the above steps. "I cannot emphasize enough how important it is to have all of the guidelines, checklists and samples with you when viewing a demonstration. I believe you need them to remain in control during the entire evaluation, and in particular, the demonstration process" (Love, 1988, p. 48).

To select which software systems an organization would like to have demonstrated, Love has a straight forward process. He contends that in many formal demonstrations the customer can be "confused and overwhelmed with information and buzzwords" and that this situation can be avoided (Love, 1988, p. 48). The procedure to avoid these

situations includes the previous discussion of developing objectives, guidelines, a checklist and packet of samples." Next, send a request for information (RFI) to numerous vendors, "particularly to those you heard about from your peers or have seen at conventions or meetings" (Love, 1988, p. 48). This RFI needs to be specific and coincide with the organizations objectives. In addition to the request for information, the vendor should be asked for 8 to 10 references that are similar to the requesting organizations size, scope and nature (Love, 1988, p. 48). When requesting references, ask for one who has used the system for several years. "Getting a sense of the evolution of the product to date will give you a good indicator of its future" (Weissman, 1991, p. 69). "A request for information of this type will immediately eliminate some vendors from consideration, and the reference check will eliminate others. ... There is no reason to waste your time or the vendor's time if there is not a potential fit" (Love, 1988, p. 48). In addition, Williams (1991, p. 60) contends that the important considerations to look for are quality of product, training and installation and ongoing service". He also contends that "embarrassing questions" need to be asked of these three areas. These questions will also eliminate some vendors. Examples of such questions are as follows:

1. Give me the names of at least five users who turned down your system in preference for another one.
2. Once the system is delivered and installed, how long will it take to codify and enter all of my data?
3. Compare your quality, training, installation and ongoing service to you competitors (Williams, 1991, p. 60).

Next, the references need to be checked. If possible, locate users who have used this particular software. It is important to ask questions that pertain to the organization's objectives to verify that the system's functionality is the same. Whenever

possible, a visit to the reference organization will make the assessment more valuable. Make the majority of the questions open-ended and take extensive notes (Love, 1988, p. 48).

An organization is then ready for the demonstration provided they are comfortable with the information obtained from the vendor and from the reference organizations. At this demonstration it is important to ask how this system will meet the organization's list of needs and objectives. Reference to examples in the sample packet and asking specific questions will assist in fully understanding the system. Proffitt is clear on what the organization is to expect from the vendor, "Have the vendor show you how, not tell you how" (Proffitt, 1985, p. 63).

When the demonstrations are complete, vendors need to be selected that best meet the objectives and guidelines of the organization. A specific bid proposal then needs to be requested of these vendors. When selecting these vendors it is important to consider these additional questions and issues.

- What is the vendor's support and training policy?
- How are software updates handled?
- What type of users' manual is provided?
- How financially sound is the vendor?
- Specific pricing and equipment configurations (Love, 1988, p. 50).

Upon receipt of the vendors bid proposals, an extensive review of the proposals should take place. Walton (1990, p. 30) offers some sample questions that may need to be asked when evaluating the software systems.

1. Does the software fit?
2. Is the price right?

3. What is the vendor's track record in the organization's area?
4. What are the vendor's policies and practices in regard to training personnel to use the software?
5. How will the vendor help plan for implementation of the system?
6. What kind of ongoing support will the vendor provide?

The last step is to make the actual selection of software. Love feels that "after completing the entire process, you will be able to make an informed decision quite easily and feel very comfortable with a development system that will achieve or even exceed your objectives" (Love, 1988, p. 50).

As a review and for easy future reference, consider the following:

- Develop complete set of objectives
- Refine and rank importance of objectives
- Compile information about software functions available
- Compose checklist for vendor product demonstration
- Create sample packet and evaluation form for vendor product demonstration
- Select vendors for demonstrations
- Send vendors request for information
- Check out vendor references
- Conduct vendor demonstrations of software
- Request specific proprosal from vendor
- Evaluate vendor proposals
- Select the software system

Fund-Raising Software - Manufacturers' Information

In order to gain a clearer understanding of what fund-raising software encompassed, the features that are available, how companies market their product and what they may perceive to be important features, reviews were made of manufacturers' sales materials. The software vendors previewed in this section are:

1. Echo Development System
2. PledgeMaker
3. FundRaiser

None of the manufacturers reviewed included any information pertaining to cost of the software. Each vendor included a personalized letter stating they were willing to assist in any way, but never any reference to price. They all relied on the need for the reader to call for more information.

Echo Development System - by Echo Consulting Services

The Echo Development System is designed to serve the needs of a variety of organizations. The system is capable of classifying individuals and organizations according to their characteristics. An organization can keep track of donors and nondonors as well as separate lists of donors, i.e. legislators, doctors, etc... . There is the capability of eliminating duplication when sending out mailings. The system has merge and interface capabilities which make it possible to send out tax receipts and thank you letters.

In addition, the Echo Development System has a report writer. There is a large selection of prepared reports to choose from or specialized reports can be created by the organization for their specific needs. Graphics may also be used to display report information.

With this system merge files can be created which can be used with the organization's word processor. By using these files with the standard word processor, correspondence can be personalized.

Features

- Donor Tracking - Echo tracks gifts, pledges, in-kind gifts, sponsored events, and many other types of transactions. Not only can membership renewals be tracked, but classification of the gift by campaign, restrictions, payment method, or any other reason why the donor gave can be tracked. Donors can be linked to memorial gifts or fund-raising events, such as Walk-a-thons.

- Contribution Tracking - Each donor has a record in the master file which has a complete donor history. Information in this file includes first, last, and highest gift dates and amounts. Additional information about the individual or corporation can be maintained and user-defined fields may be selected to search for data and for use in reports.

- Fund-raising - Fund-raising events can be managed. When the event is a pledge per unit, such as a Walk Bike Bowl-a-thon, donors and their sponsors can be linked for record keeping.

- Letters - No letters can be generated from this system. Mail merge for the user word processor is possible.

- Reports - Numerous prepared reports are available. The list of possible reports includes Donor Lists and Historys, Duplicate Donors, Campaign Comparison, Giving Patterns, Membership Renewal and Cash Flow, to name a few. Custom reports can also be created and tailored for the specific organization.

- Desktop Publishing - The Report Writer is also capable of preparing bar, line and pie charts, without any custom programming.

- Word processing - Files can be created to merge with the organizations existing word processor. Recipients of the mailing can be chosen by any subset of the database.

- Mailing List - The mail merge function is used to create mailing labels and lists, donor history cards and the like. The information is then interfaced with the word processor.

- Additional Features -
  - Export to spreadsheets
  - dBASE (tm) compatible files
  - Menu Driven

PledgeMaker - by SofTrek

PledgeMaker was created using Oracle. The system uses function keys instead of menus. Error messages and online help screens assist the user in providing immediate help.

The prospect database is used to keep all the data concerning donors and future donors. When entering data, fields are verified according to user defined tables that hold all valid entries, thereby protecting database integrity. A detailed history of each donor is maintained. Information includes donations, pledges and memberships. Payments and pledge balances are available and manipulated through various screens. Batch entry is available for large amounts of donations, pledges and or memberships.

PledgeMaker also provides the ability to maintain registrations for special events, seminars and programs for any individual in the database. Fees, registration type and various classifications can be stored.

A number of reports can be generated by PledgeMaker. Reports and mailing labels can be created from the database for use with the organizations word processing. All reports can be viewed on the screen before printing. In addition to the reports, files can be created for export and transferred to a variety of database and accounting packages. Custom reports can be designed using a query method.

Features

- Donor Tracking - PledgeMaker is able to store prospects and donors in its database, with look-up available by contact name, organization, city, zip or ID number. After a prospect is identified, a menu is used for transaction options. Within this database, the individual can be linked to special events or seminars.
- Contribution Tracking - Pledges, donations and memberships can be tracked. Batch entry allows for quicker processing. Schedules can be determined for payments and give balance dues.
- Fund-raising - No fund-raising tracking is available.

- Letters - No letters can be generated from this system. Mail merge for the user word processor is possible.

- Reports - Specific, standard reports are available to handle accounting and analytical requirements. These reports allow for specific dollar ranges, codes and dates as a way to customize the output. The organization can also design their own reports using SQL. Any field in the database can be used for sort, comparison or selection to create a report.

- Desktop Publishing - Not available.

- Word processing - Mail merge files can be created to be used on the organizations word processor.

- Mailing List - The mail merge function is used to create mailing labels and lists, donor history cards and the like. The information is interfaced with the word processor.

- Additional Features -
  - Export to fund accounting and spreadsheets
  - Grant Proposal Tracking
  - Function Key and Menu Driven

FundRaiser - by Environmental Information Systems

FundRaiser has the capability to perform many of the functions needed by a non-profit organization. It "monitors data integrity at all phases of entry and processing" (FundRaiser Software System, 1991). This system can track multiple campaigns and projects in addition to automatically tracking pledges and receivables, and the effectiveness of individual recruiters and recruitment methods. A report generator allows the user to design custom reports or to use the standard reports available within the system. There are multiple fields that can be user defined, thereby providing flexibility to the system.

FundRaiser is also capable of transferring data to other programs, such as word processors and spread sheets. The system provides an interface between programs so data can be moved between applications. Data is stored in dBase files.

Features

- Donor Tracking - FundRaiser, as with other systems, can store much data about its donors. In addition to the various names, addresses, and personal information each donor record has, there are also fields for detailed notes and contribution information.
- Contribution Tracking - Various forms of contributions can be tracked using FundRaiser. Memberships, pledges and contributions are all automatically tracked. Included is the ability to track the organizations recruiters and their respective effectiveness.
- Fund-raising - No fund-raising tracking is available.
- Letters - No letters can be generated from this system. Mail merge for the user word processor is possible.
- Reports - A large number of standard reports are available with FundRaiser. The general categories of the standard reports are Revenue, Pledge, Decision Making, Demographic and General Utility. Reports reports can be customized by requesting them using any number of the defined data fields and associated ranges of data within those fields. The user designs and can then save the format and conditions for future use.

- Desktop Publishing - Not available.

- Word processing - FundRaiser is able to create a file to mail merge. In addition it can automatically run the users word processor directly from the program.

- Mailing List - Lists can be created using the mail merge function. Mailing labels can be printed in several formats. Envelopes can be printed on a laser printer that will include the postal bar code.

- Additional Features -
  - Menu Options, "Windows" like
  - Time Management System

The After Study

Structure of the Study

In order to create a query system which would assist non-profit organizations in the software selection process, it is essential to gather data from a sampling of these organizations relating to what they perceive their needs would be. To accomplish this, two types of interviews were done, personal and telephone.

For the personal interviews, three non-profit organizations were interviewed and for the telephone interviews, nine organizations were called. The selection of which organizations to interview was based upon their size, small, medium and large.

To determine small, medium and large I adopted a process that United Way uses and made some slight modifications. Within United Way, an organization's annual budget amount is one of the major factors used to determine the type of United Way audit an organization must undergo that year. Generally, if the annual budget is $100,000 or less, only a review is done. If the annual budget is $100,001 to $500,000 an audit on alternate years is done. For organizations with an annual budget over $500,001, a full audit is done every year (Gast, 1992). Based upon United Way's method of grouping the organizations, I followed suit. The modification I made was to slightly adjust the annual budget dollar ranges for the three groups so as to better encompass organizations which were borderline. The classification for this study are as follows: small - $0 - $150,000; medium - $150,001 - $550,500; large - $500,501 and up.

To decide which organizations, per size category, were to be interviewed, a United Way agency list (Appendix C), listing United Way organizations and their annual budget, was used. It was decided that this list was a good resource for organization names and that an agency's needs would be representative of organizations that are not United Way affiliated.

Tools used for these interviews included a software feature sheet listing fund-raising software features (Appendix D) and a series of questions (Appendix E) pertaining to the use of the mailing list and label feature. The list of software features was compiled from articles concerning software and from a yearly software directory printed in Fund Raising Management (Romano, 1991, p 32-36). Six software package reviews were analyzed and a list was compiled of all the features mentioned (Appendix F). In the laboratory study, desktop publishing was a feature listed. For the after study it was excluded because there was no mention of it in any of the software reviews or articles. One software package mentioned graphs and charts, but no other features considered to be desktop publishing.

From this list the features were merged and a comprehensive list of possible features available on fund-raising software was compiled. This list was used in all the interviews. Each interviewee was asked to rank each feature as to whether it is a "must have", "desired", or "not need" for that organization.

The questions pertaining to the mailing function were used to pinpoint particular information about how the organization handles the mailing process. The information gathered in this manner was used to develop in-depth queries in the expert system.

Conducting the Study

As previously discussed, data for this study was collected using two methods, personal and telephone interviews. The personal interviews were done first followed by telephone surveys.

It was decided that three personal interviews would be done. One organization from each category, small, medium and large, was chosen. The selection of which organization in each category to interview was arbitrary. The organizations interviewed are as follows:

- Association of Retarded Citizens of Clackamas County - Small
- Northwest Pilot Project - Medium
- YWCA - Large

Each interview lasted approximately one hour. The format of each interview was basically the same. It began with an explanation about the research that was being done and how it was going to be used in the future to help non-profit organizations in the software selection process. Next, open-ended questions were asked about the particular organization and how they had dealt with selecting the software they were using today. Questions were also asked about how they used their software and if their were any functions they wished the software could perform. Depending upon the answers, further inquiries were made. Each organization demonstrated the software they owned. While viewing the demonstration, more discussion took place concerning needs and desires of the software.

In the last portion of the interview each interviewee was asked to consider the software features list (Appendix D) and indicate whether these were "must have, desired or not need" features. After ranking the features as to desirability, questions were asked concerning the mailing list and label features (Appendix E).

Next in the study were the telephone interviews. The data gathered from these included only the ranking of need of the software features and the detailed mailing list information. Nine organizations were selected to be contacted, three from each of the size categories. The organizations selected are as follows:

Small
- Foster Parents Association
- Oregon Donor Program
- Oregon Council on Crime and Delinquency

Medium
- Epilepsy Association of Oregon
- Clackamas Women's Service
- Insights Teen Parent Program

Large
- Jewish Family and Child Services
- Girl Scouts
- Waverly Childrens Home.

Each of the nine organizations were called and the person who primarily deals with the computer was questioned. It was explained why the interview was being done and how it was expected to help non-profit organizations in the future. It was explained that a list of fund-raising software features were going to be read off and they were to label each feature whether it was a "must, desired or not need" feature. After reading the list, the questions were asked concerning the mailing lists. After answering the questions each person was asked for any general comments about the software they used and their involvement in its selection.

Results of the Data Collected

Data collected during the personal and telephone interview process was accomplished using three tools. For all the interviews a list of software features was presented and the interviewee indicated how necessary these features were to the operation of the organization. In addition to this list, a series of questions was asked concerning the use of mailing lists and mailing labels. The personal interviews had one additional element, general questioning about the organization's fund-raising process, the software they use and in some cases a demonstration of the software.

Desirability of Software Features

A review of the data collected concerning the desirability of specific software features is reflected in Tables 1 - 4. These tables show how each organization, whether small, medium or large, ranked the desirability of software features. Tables 1 through 3 are the results of each size group's ranking. Table 4 is a summary of the 12 organizations and their desirability ranking of each software features.

After interviewing and talking with 12 non-profit organizations about the fund-raising software they use and what features they may or may not need, it is clear that there is some consistency in a pattern that there are some features which are a must for any non-profit organization, no matter what the organization size.

In review of the results in Table 4, there are 6 features which have the concurrence of 10 to 12 of the organizations that they are a "must have" feature. These software features are donor tracking, predefined reports, mailing lists, mailing labels, letters and utilities for data backup. On the opposite end of the scale, there is one feature which all 12 organizations decided was a "not need" feature - time management.

TABLE 1. Summary Table for Fundraising Software Features Used by the 4 Small Nonprofit Organizations.

Software Features	must have	desired	not need
Donor Tracking	2	2	
Pledge Tracking	1		3
Demographic Information	3		1
Gift Tracking/History	3	1	
Online Inquiry	4		
Pledge Documentation		1	3
Receipts		2	2
Reports- Predefined	4		
Reports - Custom Designed	3		1
Wordprocessing Interface	4		
Pledge Reminders/Acknmts.	3		1
Accounting Interface	1	2	1
Mailing Lists	4		
Mailing Labels	4		
Letters	4		
Fundraising		3	1
Utilities for Data Backup	3	1	
Time Management			4
Grant Proposal Tracking	1	1	2

TABLE 2. Summary Table for Fundraising Software Features Used by the 4 Medium Nonprofit Organizations.

Software Features	must have	desired	not need
Donor Tracking	4		
Pledge Tracking	1	1	2
Demographic Information	2	2	
Gift Tracking/History	1	3	
Online Inquiry	2	2	
Pledge Documentation	1	2	1
Receipts	1	3	
Reports- Predefined	3	1	
Reports - Custom Designed	3		1
Wordprocessing Interface	3	1	
Pledge Reminders/Acknmts.	1	2	1
Accounting Interface		3	1
Mailing Lists	4		
Mailing Labels	4		
Letters	4		
Fundraising	2	2	
Utilities for Data Backup	4		
Time Management			4
Grant Proposal Tracking	1	3	

TABLE 3. Summary Table for Fundraising Software Features Used by the 4 Large Nonprofit Organizations.

Software Features	must have	desired	not need
Donor Tracking	4		
Pledge Tracking	2	1	1
Demographic Information	4		
Gift Tracking/History	4		
Online Inquiry	3	1	
Pledge Documentation	1	2	1
Receipts	1	1	2
Reports- Predefined	3	1	
Reports - Custom Designed	2	2	
Wordprocessing Interface	2	1	1
Pledge Reminders/Acknmts.	2	1	1
Accounting Interface	1	2	1
Mailing Lists	4		
Mailing Labels	4		
Letters	2	1	1
Fundraising	2	2	
Utilities for Data Backup	3	1	
Time Management			4
Grant Proposal Tracking	1	2	1

TABLE 4. Summary Table for Fundraising Software Features Used by All 12 Nonprofit Organizations.

Software Features	must have	desired	not need
Donor Tracking	10	2	
Pledge Tracking	4	2	6
Demographic Information	9	2	1
Gift Tracking/History	8	4	
Online Inquiry	9	3	
Pledge Documentation	2	5	5
Receipts	2	6	4
Reports- Predefined	10	2	
Reports - Custom Designed	8	2	2
Wordprocessing Interface	9	2	1
Pledge Reminders/Acknmts.	6	3	3
Accounting Interface	2	7	3
Mailing Lists	12		
Mailing Labels	12		
Letters	10	1	1
Fundraising	4	7	1
Utilities for Data Backup	10	2	
Time Management			12
Grant Proposal Tracking	3	6	3

The next significant level of agreement among these twelve organizations is the concurrence of 8 or 9 organizations. There were five features which fit into this category and all under the "must have" level. These five features, which will be categorized as the next most important software features needed, are demographic information, gift tracking and history, online inquiry, custom designed reports and word processing interface.

The majority of the organizations interviewed did not need pledge tracking as a software feature. The reason is because they do not handle their donations using the pledge process. It has become too expensive and cumbersome and they have chosen to gather donations in various other ways. Along with this the use of pledge documentation is little used or desired. In contrast, pledge reminders and acknowledgements are needed by 6 of the 12 organizations. This can be explained by the fact that they use this feature to send out thank yous and membership reminders.

An accounting interface was a desired feature by over half of the organizations. They saw this feature as a nice idea, but not necessary to the day to day operation. One organization, the Northwest Pilot Project, said that their auditor has told them that they are not allowed to connect the logging of donations and the entering of the same into the bookkeeping system. They are to have two people perform this job function. This is their security measure so that there is not just one person handling all the money and associated tracking and bookkeeping entires.

The ability to track fund-raising events was another feature considered to be useful, but not essential in the day to day workings of the organization. Most organizations had some useable method of keeping track of this information, but thought a system which tied it into the donation process would be nice to have.

When the desirability factors of the software features are weighted a ranking of those features results. Table 5 shows the summary data of Table 4 with the addition of a column indicating a total number of points acquired through a weighting process. The

desirability features were weighted as follows: "must have" - 3, "desired" = 2, "not need" - 1. This weighting process enables a ranking of the features as to their level of need or desirability. Based upon the total points, these features were ranked. In the case of the points being the same, knowledge from the interview process was used to determine the final ranking. Table 6 shows the ranking that resulted from the weighting process. The list begins with the most desirable at the the top, moving down to the least desirable at the bottom.

TABLE 5. Software Features With Weighted Scores

Software Features	must have (3 pts)	desired (2 pts)	not need (1 pt)	weighted scores
Donor Tracking	10	2		34
Pledge Tracking	4	2	6	22
Demographic Information	9	2	1	32
Gift Tracking/History	8	4		32
Online Inquiry	9	3		33
Pledge Documentation	2	5	5	21
Receipts	2	6	4	22
Reports- Predefined	10	2		34
Reports - Custom Designed	8	2	2	30
Wordprocessing Interface	9	2	1	32
Pledge Reminders/Acknmts.	6	3	3	27
Accounting Interface	2	7	3	23
Mailing Lists	12			36
Mailing Labels	12			36
Letters	10	1	1	33
Fundraising	4	7	1	27
Utilities for Data Backup	10	2		34
Time Management			12	12
Grant Proposal Tracking	3	6	3	24

TABLE 6. Ranking of Fund-raising Software Features

Results are listed in descending order of need.

1. Mailing Lists
2. Mailing Labels
3. Donor Tracking
4. Predefined Reports
5. Utilities for Backup
6. Letters
7. Online Inquiry
8. Demographic Information
9. Word processing Interface
10. Gift Tracking History
11. Custom Designed Reports
12. Pledge Reminders Acknowledgements
13. Fund-raising
14. Grant Proposal Tracking
15. Accounting Interface
16. Pledge Tracking
17. Receipts
18. Pledge Documentation
19. Time Management

The results of these interviews can also be looked at to see if there are any differences in the desirability of software features because of an organization's size. In this case there are no glaring results showing that one size of organization uses many more features than any other size of organization.

What does become evident is that all sizes of organizations have basically the same number of "must have" features, but small non-profit organizations have a larger amount of "not need" features. For each organization size, small, medium and large, the number of "must haves" was 44, 41 and 45, respectively. In contrast, for the "not need" features, small organizations indicated 19 features, whereas medium size was 10 and large size was 13. It then follows that the medium and large size organizations would have more "desired" features than the small organizations.

By the very nature of how small non-profit organizations operate, these results reaffirm that small non-profits have the basic needs of other sized non-profits but require less in the way of "bells and whistles" for their operation. Small non-profits have a struggle to survive and their operations can only encompass the basic necessities.

Mailing List Questionnaire

In reviewing the results of the questions asked concerning mailing lists and labels a pattern is seen when it comes to the number of mass mailings an organization does in a year. It appears that the number of mailings done by an organization is directly proportional to the size of the organization.

Throughout a year, all the organizations send out newsletters and some form of donation request, whether it be asking for a membership or an out right donation. The difference is in the number of requests in a year's time. Small organizations do between 1 and 5 large mailings a year. This includes the newsletters and any requests for donations. Medium sized organizations send between 3 and 6 mailings each year. The

large sized organizations did no fewer than 4 in any year, and the maximum number being 9.

All the organizations, independent of size, have a need to pull of mailing list or labels using specific criteria. In some instances they only need to pull off lists by zip code for bulk mail discounts. In other cases lists were pulled off by job occupation or last gift size.

On the questionnaire there was a question asking whether the organization would use seasonal addresses. Some of the people interviewed found this amusing. At first they were perplexed as to what was meant. Upon finding out that this is the field where the extended vacation address is placed, they indicated unanimously that there was no need. This question was asked in the interview because many of the software sales information brochures spend lots of time discussing the feature of seasonal address storage and it needed to be determined if there is truly a need for such a feature. The conclusion is that in the Portland area there is no need for a seasonal address field.

All of the organizations produce mailing labels. It is the major method of dealing with all the mass mailing done each month. Some of the organizations expressed a wish that they had a method to place the address directly upon the envelope, rather than use a label. They stressed that the letters would not have the standard bulk mail appearance, therefore, increasing the chance of the letter being opened. "If a letter is not even opened, we don't have a chance at persuading them to give" (Gould, 1992).

Personal Interviews

Three personal interviews were conducted, one from each size group. The desirability and questionnaire data is consolidated with the data from the telephone interviews. Following is a review of each interview, highlighting the additional data learned.

Summary of Interviews

Association for Retarded Citizens (Clackamas County) - Joan Witthams

ARC of Clackamas County uses software that is not specifically designed for non-profit agencies. It is a general database and publishing software system. The software, First Choice, is used to maintain their databases. The various databases they keep include membership and fund-raising. The software, First Publisher, is used to create newsletters, graphics and flyers.

This organization does four to five mailings a year asking for donations. They use their membership and fund-raising list for the names of whom to send requests. The membership list is the primary source of donors and it consists of approximately 850 names.

ARC has a need to pull off lists of names from their database using specific criteria. The most frequent criteria they use deals with who participated in which fund raiser. For example, there are persons who may have bought a Christmas wreath or purchased an Entertainment Book and ARC needs to contact them again about a repeat purchase for the current year.

The keeping of demographic information is important to this organization. They need to know about each donor and whether that person is a parent of a client, a worker, member or in-kind donor. Depending upon the category of each person, specific letters and requests are sent accordingly.

The ARC produces no reports using this system. If any reports are needed someone gathers the information needed and types it on the typewriter. If accounting information is needed, the bookkeeper manually calculates data from the accounts and produces the report accordingly.

The major function of the software they use is to produce mailing labels and lists and create flyers and the bi-monthly newsletter. Many of their functions are still done manually. For example, membership reminders are sent out based upon someone looking through the 3 x 5 card file and seeing who has not yet paid this year. The system does keep track of who has paid for the year, but it has no way of listing who has not, so that a reminder letter can be sent. The one wish the organization had was to be able to print envelopes with the addresses rather than using labels. They felt this was important to creating a better looking donation request.

Northwest Pilot Project - Susan Emmons

Northwest Pilot Project (NPP) uses software which was locally designed for non-profit agencies. It is InfoTrak, Membership and Fund-raising Management Software. They have been using this software for about five years. The system maintains databases and can publish letters, lists, labels and reports. Whenever some changes need to be made, usually to accommodate different office procedures and needs, the developer is called and for a nominal fee the changes are incorporated into the current system.

The donor database has approximately 3000 entries. On this database all the donors, volunteers, board of directors, and fund-raiser participants are kept. The information kept on each person includes name, address and telephone number. Each entry is given any number of the fifteen possible mailing list classifications. These classifications are used to isolate entries for reports, lists and labels. Some of the possible classifications are donors, volunteers, walkers and social service agency affiliation. The date and size of each donation can be kept for each entry. This allows for a history of each donor to be kept and gives additional fund-raising strategies.

NPP handles their yearly fund-raising by doing a major mailing campaign to all of their mailing list and then follow-up with a telephone campaign. In addition to the mass mailing, requests for money and envelopes are included in the newsletter which is sent out each quarter. The request in each newsletter nets about $2000 each quarter.

The biggest mailing NPP has is the quarterly newsletter. 3000 newsletters are sent out to every 3 months. NPP perceives the newsletter as a major fund-raising tool because it keeps people informed as to the work that is accomplished and what the future needs will be for money.

NPP did not have a need for their fund-raising software to be able to interface with accounting software. The auditors have specifically said that they want these functions handled by two different people so that cross checks can be made against one another.

When producing letters, first a list is compiled of the people that are to receive them. This is done in the same way as the mailing labels are created. The criteria of selection is chosen and then the system searches the database for matches. For example, the request could be for all donors who gave a contribution last year of more that $50 and who live in zip code area 97201. The system would then create mailing labels of all the matches. Next, the letter that is to be sent is written, leaving blanks for the personalization. Each letter is then done separately. The name and address is placed on the letter along with a personalized salutation. The system is then asked to print the basic letter below.

Database duplication is generally handled in three ways. The primary method is the 'eyeballing' process. If an entry is going to be made to the database, the person entering the information visually checks the screen for possible duplication. Another method of checking is to rely on the input person to remember seeing that name or address on the list before. The third method of detecting duplicates is the people that call saying that they receive more than one copy of the newsletter.

NPP is pleased with the software they are using. It accomplishes the tasks needed to be done. They believe that without the computer system they would need one more person in the office to do the extra work.

YWCA - Jerry Bores, Business Manager

The YWCA uses their fund-raising software for two purposes, membership maintenance and development. The activities they perform for membership include renewals, recording demographics of their members and keeping prospect information for future donation requests. Within the development portion the YWCA maintains the history of their donors, levels of the donations and fund-raising event information.

Currently the YWCA is in the process of searching for a new fund-raising software system. To accomplish this they designed a process which is similar to the ones discussed in the articles by Love and Proffitt.

The first step they accomplished was to define the features they needed on the new system. To do this they determined what the objectives of the development department were and then how these could be fulfilled by using a computer system.

Next, it was decided who was to do the research for the 'ideal' system. The research phase includes no only researching particular software, but also obtaining recommendations from other users for the software of choice.

Because of the YWCA's limited personnel resources, the same person who performs the research will also be responsible for the purchasing of the software. After the purchase this same person will need to become proficient in its use, assist in conversion from the old system to the new and train others in how to use the new system.

There was discussion concerning how a non-profit decides how much money can and should be spent on a new software package. In the case of the YWCA it was decided up front how much money was available. In contrast, Bores believes that most non-profits operate differently and would not first decide how much money to spend on a software system.

When a non-profit organization is facing the decision of whether to purchase a new software system, Bores (1991) has some question he feels an organization should ask themselves. First, "Why isn't the current system working as it should?" There is the possibility that no one was properly trained on the system and therefore, the true capabilities of the system are unknown to the user. According to Bores, what happens in many cases is that a new system is installed and within a few months the one person who knew the most about the system leaves the organization and no one really knows anything extensive about the system. What also needs to be asked is "Who has the right to make the decision when purchasing the software and what will be the guidelines for making the decision" (Bores, 1992)? Thirdly, Bores stresses that it is important for an organization to determine who in that organization has ongoing responsibility for the system. It is important for someone to be in-charge so that needs and wants, problems and questions can be properly addressed in a timely manner.

Building the Expert System for Software Selection

In the laboratory study it was discussed how non-profit organizations handle the selection process. It was said that the methods used included gathering information about software packages, talking with other non-profit organizations about their software, and using the advice of the salesperson or vendor. These still hold true, but with many additional steps to be accomplished. In reality, there are many steps that need to be done before a non-profit organization can consider looking at any systems or using an expert system to find which packages will fit their needs. Many decisions need to be made before an organization can truly know their needs and wants accurately.

The expert system designed is to be used after a non-profit organization has defined and ranked their objectives. Granted, the expert system can be used any time, but a greater level of success can be achieved if the organization first knows what they are trying to accomplish and what are their priorities.

Databases

The expert system built for the software selection process queries the user, asking questions pertaining to the needs and software requirements of the specific non-profit organization. Based on the answers to these questions software is selected from the database which matches these requirements. Appendix G illustrates the field structure of this database. In the database each record represents a specific software package. Within these records are fields which indicate whether the software package has or does not have features a particular organization may desire. For example, a record may indicate that this package has donor tracking and word processing interface, but no accounting interface. The field for each feature has a 'yes' or 'no', indicating its presence or absence. After the user query, the resulting answers are matched to records in the

data base in order to find matches. These matches constitute the software recommendation.

The software selection process has a second database. This database contains descriptive information on each of the software packages that the system may recommend. In addition to information pertaining to the software packages there are also references listed. These references are non-profit organizations who have or who are currently using the particular software package. The references will include local non-profits, if possible. These references are listed so as to make the reference check step an easier process for the user. This database is accessed after recommendations are made and the user has chosen to review a software package. Appendix H details the field structure of this database.

For the purpose of this study, the data in these two databases is not factual. It has been developed for the purpose of demonstrating the software. The process of extensively reviewing software packages and determining their precise features is a study in itself and not encompassed in this project.

Queries

The queries are questions asking the user about specific features the organization might need or desire. The features being inquired about were derived from the literature and interviewing the non-profit organziations.

For the purpose of this study, and the model expert system, all queries have not been designed. It is expected that there are some 'not so black and white' areas which are part of this process. Therefore, a real system would need to query the user in greater depth and based upon the answers either ask additional questions or form an 'opinion' from a rule given.

For this model system one area does deal with the additional queries concerning a specific feature, mailing lists. This was done to give an idea of how the remainder of the system will be designed in the future.

Besides asking questions of the user, this system also has been designed to be user-friendly. So that a more personal touch can occur during the query process, the system asks the user which organization they represent. Another feature to help the user is having questions designed which assist the thought processes of the user. Before each question there is a slight discussion about the feature, so as to evoke some thinking on the part of the user.

The expert system, as coded, is in Appendix I. This system has been designed to run using the software VP-Expert.

How the Expert System Predicts

Upon entering the system the user is welcomed and asked for the name of the non-profit organization who is requesting the recommendation. Next, a series of questions are asked to determine which features the organization desires in a software package. Before each question, there is prose which gives "food for thought" and is designed to help the user with the decision. Each question requires the user to answer yes or no. For example, to inquire about the need to produce letters, the system displays the following:

> "Some organizations have a large volume of letters which are written and mailed to various other organizations and individuals This process is cumbersome and very time consuming.
>
> Does your organization have a need for a mechanical way of producing large volumes of letters?"

For the purpose of this study, additional questions have been developed concerning mailing lists. If an organization replies "yes", they do use mailing lists, then further questions will be asked to more clearly define their requirements. Questions such as these will allow for a more accurate software recommendation to fit an organization's needs.

When all the questions have been asked a screen in presented for review of the answers. The screen after the review begins the display software recommendations. Upon completion of the recommendations, the user is given the option of learning more about a particular software package. This information includes price, references and developer information.

The complete dialog of the expert system, as as it appears to the user, is presented in Appendix J. The screens are in the order that a user progresses through the system when seeking a recommendation.

Conclusion

Summary

When comparing the system designed following field research to the system built by a naive engineer, there are some major differences. When the laboratory study was created there was little actual experience used in the creation of the knowledge-base for the expert system. Small bits of information were gathered from articles and brief discussions with employees of non-profits. As a result the system designed did not encompass the entire set of needs and desires organizations have when it comes to fund-raising software.

A major difference between the two systems is the number of software features that need to be incorporated into the query of the expert system. In the laboratory study there were six features that were the basis of the queries: letter writing, reports, desktop publishing, word processing, mailing lists and fund-raising. In contrast, the system designed after research and interviews has nineteen features which make up the queries that ask the user their needs and desires. The nineteen features did, however, include five of the six from the laboratory study.

When reviewing the features that have become part of the after study system it is seen that some encompass areas of how a non-profit does business. For example, the activity of gathering and keeping track of pledges. This requires quite a bit of work and the computer is a logical place to maintain this information. As a result the features of pledge reminders and acknowledgements, pledge documentation and pledge tracking are important to the organizations who rely on pledges for a source of support.

Another factor which caused additional features to be added is the actual ability of the system to manipulate data for other purposes. Many software packages are able to gather and process data from the fund-raising databases and make available for

export and mail merge options to other software programs such as LOTUS 1-2-3, WordPerfect, MS Word, DBASE and others.

Features such as online inquiry, printing of receipts, a utility for data backups, an accounting interface and time management have little to do with the actual administration of the donation fund-raising function, yet these features were part of many software packages and among the needs and desires of the organizations interviewed. They, too, became incorporated into the after system queries. Online inquiry and utility backups was a "must have" for at least 75% of the organizations interviewed. The remainder said they were a desired feature. The printing of receipts and having an accounting interface process were not "must have" features, but definitely desired by the majority.

Other differences between the laboratory and after study query features deal with the tracking of data within the system. Donor tracking, gift tracking, and grant proposal tracking are features which an organization may or may not require, yet they need to be part of the questioning of the future system user. Depending upon how an organization is administered determines whether there is a need for these features. Some organizations prefer to keep grant tracking manual, using the manilla file folder method. Whereas, other organizations look forward to using a computer to simplify this process.

Another difference between the two systems is the necessity of inquiring about the size of the organization in the query process. In the laboratory study the user was asked what size of organization they represented, small, medium or large. This was incorporated with the idea that there were software packages especially for different size oriented organizations and that there were features that would be used by one size of organization and not another. In reality, asking someone the size of their organization is not really necessary. It was found that the software features an organization may consider as needed for their system has has nothing to do with the size of the organization. There are some features which virtually all the organizations need and the

remainder of these features are needed based upon how each non-profit administrative functions are organized. Organization size is not at all necessary when determining software that is appropriate for a particular organization.

Another difference between the two studies deals with the aspect of the steps an organization goes through to select their software. In the laboratory study it was assumed that by asking questions about the features they desired, the user would be able to determine their needs at that point in time and answer a simple yes or no to questions asked. There was discussion that the inquiry would be detailed and that accurate answers could be obtained by querying the user in depth. In contrast to this, the new system was designed to be used after the user has gone through an extensive objectives definition and ranking procedure. This step requires much input from other persons involved in the organization and cannot be done at the spur of the moment with a few well written questions from an expert system. The research shows that this is an important process for any organization to perform.

An addition to the after system reflects the need for the organization to check out references for the different software packages they might be interested in purchasing. Checking references is one of the steps that should be done before any purchase is made. This process was not considered in the laboratory study. Therefore, the after study has a facility to give reference information to the user after receiving the software recommendations. This was incorporated into the database which has all the information about the software packages.

As a brief review, there are four major differences between the laboratory and after systems. These differences not only deal with the actual way the system was written, but with the necessary high level of preparation needed on the part of the user. Following is a summary list of the differences found in the after system:

1. More Software Features Queried - It was discovered that there were more features available in software packages.

2. Size Not Considered In The Queries - Inquiring about the size of the organization is not necessary because use of the software features is not dependent upon organization size.

3. Placed References In The Software Database - Since references are an important part of the selection process, they were added to the software database for the convenience of the user.

4. Organization Objectives Determined Before Using Query System - This important step was not considered in the laboratory study and is key to successful selection by an organization. Therefore, it must be addressed.

This study helps to clarify the complexity of the software selection process and some of the danger of proposing an expert system approach prior to conducting careful research. The naive engineer of the laboratory study knew little of what was necessary for selecting software. Whereas, because of research, the after study not only encompassed many additional software features not previously realized, but encompassed steps that need to be accomplished before an expert system is to ever be consulted.

Future Projects and Research

"Steps to Successful Software Selection" Workshop

From the research conducted for this study, an additional need for non-profits has surfaced. It was discovered that few organizations have any idea of how to go about selecting software packages. The steps these organizations go through to select software have very little resemblance to the previously discussed steps which help insure a successful selection process. Therefore, what is needed is a method of instruction to teach what and how these important steps can be accomplished. Organizations who purchase software, whether it is the first or second time around, need to be aware and savvy as to how to make this process easier and more successful.

A workshop teaching non-profit organizations how to complete the steps of successful software selection needs to be developed. This workshop would include extensive discussion of the steps of selection and more importantly the whys of the steps.

Completion of the Expert System

Another future project deals with the completion of the prototype expert system. For the purpose of this study, only one of the features (mailing lists) was extensively developed. This was to demonstrate how detailed the queries would appear in a 'real life' system. Ultimately, each feature will have its own set of detailed questions, with the next question asked being dependent upon the answer of the previous question.

Maintenance of the Software Database

Future research is also needed to expand the software database. This database was kept small for the purpose of this study. In reality, there are many more packages available and should be incorporated into the system. Keeping abreast of the ever changing software packages is a large task, but must be taken care of in order to insure that when organizations make a query, they are given up to date information.

Appendix

A. Laboratory Study Induction Table

B. Laboratory Study Expert System

C. United Way Agencies and Associated Annual Budget

D. List of Features of Fund-raising Software Questionnaire

E. Interview Questions

F. Review of Fund-raising Software and Their Features

G. Field Structure of the Software Requirements Database

H. Field Structure of the Software Information Database

I. After Study Expert System

J. Expert System Dialog

APPENDIX A

A. Before Study Induction Table

computer	donor	contribution	fundraise	letters	reports	desktop	wordprocess	maillist	orgsize	software
IBM	yes	yes	no	yes	no	yes	yes	no	small	DonorHelp
IBM	yes	no	yes	yes	yes	no	yes	no	small	DonorSoft
IBM	no	no	yes	yes	no	no	yes	yes	large	Contributions-Excell
IBM	no	yes	yes	no	yes	yes	yes	no	medium	FundRaiser
IBM	yes	yes	no	yes	yes	yes	no	yes	medium	NonProfits Help
IBM	yes	yes	no	yes	no	yes	yes	no	small	DonorHelp2
MAC	yes	yes	no	yes	no	yes	yes	no	small	DonorHelp-MAC
MAC	yes	yes	no	yes	no	yes	yes	no	small	MAC-Systems
MAC	no	no	yes	no	yes	yes	no	yes	medium	MacFundraiser
IBM	yes	yes	yes	yes	yes	yes	yes	yes	small	HaveAll Systems
MAC	yes	yes	no	yes	no	yes	yes	no	small	Univesal Systems
IBM	no	yes	yes	no	yes	no	no	yes	large	Mastersystems
MAC	yes	no	no	no	yes	yes	no	no	medium	Not-For-Profit Softwa
MAC	yes	yes	yes	yes	no	no	yes	yes	small	Echo Systems

APPENDIX B

B. Laboratory Study Expert System

```
!     This system is designed to give recommendations to non-profit
!     organizations about software selections.  SSP queries the
!     user, asking for the desired features available in software.
!     In addition to the recommendation, the user can also request to
!     review a particular software package.

BKCOLOR=1;
RUNTIME;
ACTIONS
      CLS
      MOUSEOFF
      WOPEN 1,1,25,4,31,3
      WOPEN 2,6,1,13,76,7
      ACTIVE 1
      LOCATE 2,2
      DISPLAY "SOFTWARE SELECTION PROGRAM"
      ACTIVE 2
      DISPLAY "Welcome to the SOFTWARE SELECTION PROGRAM!!

This system will assist non-profit organizations
in the software selection process.

Please press any key to begin the selection process.~"
      CLS
!     Asks for non-profit organization name
      FIND nporg
      CLS

!     Queries for compute type and major features needed

      MENU comp_type, all, soft1, comptype
      FIND comp_type
      CLS
      FIND dnr
      CLS
      FIND contr
      CLS
      FIND fund
      CLS

!     Explanation to user of next queries

      DISPLAY "In addition to the major administrative functions of a
non-profit organization, there are office functions which also need to
be done.  These types of activities include letter writing,
writing reports ,desktop publishing capabilities, work processing and
the producing of mailing lists.
```

```
The next series of questions will be inquiring about the need for
these types of features and if they are needed by {nporg}.
(Press any key to continue)~"

     CLS
     FIND lett
     CLS
     FIND rpts
     CLS
     FIND desktp
     CLS
     FIND wordprc
     CLS
     FIND maillst
     CLS
     FIND orgsize
     CLS
     FIND abbrev_size

!    Selections made by user are shown for user's review

     DISPLAY "For review, listed below are software features and
whether or not they were selected for {nporg}."

!    Multiple LOCATEs align the 2 column screen

     LOCATE 3,1

     DISPLAY "
     Computer_System - {comp_type}
     Contribution_Tracking - {contr}
     Letter_Production - {lett}
     Desktop_Publishing - {desktp}
     Mailing_Lists - {maillst}"

     LOCATE 4,40

     DISPLAY "Donor_Tracking - {dnr}"
     LOCATE 5,40
     DISPLAY "Fund_Raising - {fund}"
     LOCATE 6,40
     DISPLAY "Report_Writing - {rpts}"
     LOCATE 7,40
     DISPLAY "Word_Processing - {wordprc}"
     LOCATE 8,40
     DISPLAY "Organization_Size - {orgsize}"

     LOCATE 10,1
```

```
     DISPLAY "Press any key to continue.~"

!    Looking for features match in database, SOFT1.

     WHILEKNOWN comptype
        GET    comp_type = comptype AND
               dnr = donor          AND
               contr = contrb       AND
               fund = fundraise     AND
               lett = letters       AND
               rpts = reports       AND
               desktp = desktop     AND
               wordprc = wordprcs   AND
               maillst = maillist   AND
               abbrev_size = sizeorg,
               soft1,all

        FIND chkfound
        RESET message
        FIND message
END

!    Asks if yser wishes to read a description of a software package

     CLS
     FIND review_software
     CLS
     FIND soft_answer

     DISPLAY "Thank you for using Software Selection Process.

If you wish to continue with the selection process,
press any key and then press G.

Otherwise, press any key and then press Q.~";

!    Converts user's answer of small into format for database match

RULE 0
IF   orgsize = small
THEN abbrev_size = s;

!    Converts user's answer of medium or large into format for
!    database match

RULE 1
IF   orgsize = medium
```

```
THEN abbrev_size = m
ELSE abbrev_size = 1;

!     Formats display for found or not found software

RULE 2
IF    comptype <> UNKNOWN
THEN message = displayed
     CLS
     DISPLAY "{found_msg} {software} software for {nporg}.

To check for any additional recommendations, press any key.~"
CLS
ELSE message = none
     FIND msgs
     CLS
     DISPLAY "{found_msg}.

Press any key to continue~";

!     Determines which message to display

RULE 3
IF    software = UNKNOWN
THEN chkfound = nomatch
     found_msg = SSP_is_unable_to_make_a_recommendation
ELSE chkfound = yesmatch
     found_msg = The_SSP_system_recommends;

!     Message to be displayed is previous recommendations made

RULE 4
IF    chkfound = yesmatch
THEN msgs = donebefore
     found_msg = No_more_recommendations_are_available;

!     Displays software descriptions, when requested after run

RULE 5
IF    softname <> UNKNOWN
THEN softmsg = displayed
     CLS
     DISPLAY "{softdesc1}
{softdesc2}
{softdesc3}

The price of {softname} is ${price}.
```

```
The developer is {mfg}."
     CLS
ELSE softmsg = none;

!    Asks which software description user wishes to review

RULE 6
If   review_software = yes
THEN soft_answer = yes
     MENU softinfo, all, softdesc, softname
     FIND softinfo
     CLS
     WHILEKNOWN softname
         GET softinfo = softname, softdesc, all
         RESET softmsg
         FIND softmsg
     END
ELSE soft_answer = no;

ASK nporg: "What is the name of the non-profit organization requesting
this recommendation?";

ASK comp_type: "Organizations have a variety of PC equipment installed
in their offices.  Software is designed to run on specific types of
machines, so it is necessary to determine this office's PC system.

What type of computer system does your organization have?";

ASK dnr: "Donor tracking software is useful in maintaining information
about an organization's donors.
This information includes financial status, donor donations habits,
and past contributions to the organization.

Does {nporg} have need to do donor tracking?";

CHOICES dnr: Yes,No;

ASK contr: "When the record of contributions becomes too laborious it
is necessary to mechanize the process.  Contribution tracking software
can assist with this task and save administrative time.

Is the organization in need of the contribution tracking feature?";

CHOICES contr: Yes,No;

ASK fund: "Not all organizations handle their fund raising activities.
If this organization does, then a fund raising feature might be needed
```

```
Are you interested in the fund raising feature?";

CHOICES fund: Yes,No;

ASK lett: "Some organizations have a large volume of letters which are
written and mailed to various other organizations and individuals.
This process is cumbersome and very time consuming.

Does {nporg} have a need for a mechanized way of producing large
volumes of letters?";

CHOICES lett: Yes,No;

ASK rpts: "Reports are the mainstay of many non-profit organizations.
Potential donors and Boards of Directors alike rely on data found in
these reports.  Reports are time consuming, but a necessity.

Does your organization need the report writing feature to help expidit
the report writing task?";

CHOICES rpts: Yes,No;

ASK desktp: "Desktop publishing features are used by many types of
offices.  Examples of their use includes: newsletters, flyers,
banners and printed material with graphics.

Would the desktop publishing feature be something the office could use

CHOICES desktp: Yes,No;

ASK wordprc: "Wordprocessing is a very sophisticated typewriter.
Not only can documents be typed, but they can be formatted in lots
of way, checked for correct spelling and context and text easily
rearranged.  There are many other features that word processing
has that simplify an office's tasks.

Is word processing a feature needed at {nporg}?";

CHOICES wordprc: Yes,No;

ASK maillst: "Creating mailing lists is an easy task, but very time
consuming.  For a non-profit organization it is a task that is done
over and over again.

Would you like the task of creating mailing lists to be done by
you computer system?";

CHOICES maillst: Yes,No;
```

```
ASK orgsize: "In order to select the most appropriate software for
your organization it is necessary to know the size of the organization

When detemining the size of the organization, consider the size of
the donor base.

How would you best describe your organization size?";

CHOICES orgsize: Small, Medium, Large;

ASK softinfo: "In order to learn more about a specific software packag
indicate below which one you wish to review.";

ASK review_software: "Would you like to learn more about a specific
software package?";

CHOICES review_software: Yes, No;
```

APPENDIX C

C. United Way Agencies and Associated Annual Budget

	Agency Name	1991/92 Total Operating Bud
	A Child's Place	140,455
	A Child's Place Scholarship	0
	Alberta Park Children's Ctr.	0
	Albertina Kerr Ctr.	5,740,500
*	Albina Minsterial Alliance	3,457,000
*	American Indian Association	51,476
	American Red Cross/Clark	227,148
	American Red Cross/Oregon	2,839,970
	American Social Health	6,936,665
	Assn. Retarded Citz./Clack	140,074
	Assn. Retarded Citz./Clark	254,397
	Assn. Retarded Citz./Multnomah	1,382,432
	Assn. Retarded Citz./Oregon	432,899
	Assn. Retarded Citz./Washington	201,554
	Boy Scouts/Columbia Pac.Cncl.	3,236,163
	Boys & Girls Aid Society	2,879,159
	Boys & Girls Clubs	800,000
	Bradley-Angle House	223,800
	Burnside Projects	1,542,400
	Camp Fire/Mt. Hood	991,700
	Camp Fire/Portland	1,191,570
	Camp Opportunity Clark Co.	0
	Catholic Comm. Serv./ Portland	1,304,044
	Catholic Comm. Ser./Vancouver	307,319
	Catholic Youth Organization	365,400
	Centro Cultural/Washington Co.	313,398
	Children's Club	156,900
	Children's Farm Home	3,025,188
	Children's Home Society	1,067,863
	Chinese Social Service Center	200,181
	Christie School	2,198,000
*	Clackamas County	4,640,220
	Clackamas Co. Mental Hlth. Ctr.	1,711,313
	Clackamas Women's Service	203,765
	Clark Co. Cncl. on Alcoholism	943,962
	Columbia River Mental Health	4,672,518
	Ctr. for Comm. Mental Health	1,586,890
	David's Harp	88,850
	Delaunay Mental Health Ctr.	1,866,650
	East Vancouver Child Care	564,189
	Epilepsy Assn. of Oregon	231,400
	Foster Parents Assn.	105,610
	Friendly House	725,597
	Fruit & Flower Child Care Ctr.	833,749
	Girl Scouts/Columbia River	1,274,349
	Human Services Council	4,978,058
	Insights Teen Parent Program	384,300
	International Refugee Center	2,059,300
	Janis Youth Programs	2,751,870
	Jewish Family and Child Serv.	888,549

64

* Non-Member Agencies Discretionary Funded

Kendall Community Center	78,700
L.I.F.E. Center	106,500
Linnton Community Ctr.	98,800
Lutheran Family Service	3,329,844
Mainstream Youth Program	1,265,755
Mental Health Assn. of Oregon	233,590
Metro Crisis Intervention Ser.	504,327
Metropolitan Family Service	2,120,226
Mittleman Jewish Comm. Ctr.	2,432,041
Morrison Center	4,213,080
Mult. Co. Legal Aid	1,458,250
* N.E. Child Care Task Force	0
* N.E. Coalition of Neighborhoods	709,276
N. Portland Nurse Pract. Clinic	176,456
Neighborhood Health Clinic	326,479
Neighborhood House	626,094
Northwest Pilot Project	382,635
Or. Assn. Children Lrn. Disab.	91,000
Or. Council on Crime & Delinq.	80,926
Oregon Donor Program	133,000
Oregon Legal Services Corp.	627,577
Oregon Literacy	268,500
Outside In	682,273
Parry Center for Children	2,731,666
Peninsula Children's Ctr.	853,224
Phoenix Rising	252,530
Planned Parenthood	2,704,508
Portland Women's Crisis Line	165,600
Providence Child Center	2,539,037
Ptlnd. Ctr. for Hearing & Speech	943,747
Rosemont School	1,790,702
Sabin Day Care Ctr.	53,500
Savation Army/Clark Co.	852,834
Salvation Army/Portland	5,941,276
Shelter/Domest. Viol. Res. Ctr.	254,567
Sr. Citizen Council/Clackamas Co	120,850
St. Mary's Home for Boys	2,074,237
Tualatin Valley Mental Hlth.	3,575,714
Tualatin Valley Workshop	1,048,763
United Cerebral Palsy/NE OR	1,720,436
Urban League	1,788,410
VNA Home Health Care	8,437,330
Virginia Garcia Health Center	1,244,017
Volunteer Bureau of Portland	117,264
Volunteers of America	3,066,434
Washington Co. Community Action	2,246,925
Waverly Children's Home	2,617,805
West Tuality Child Care Ctr.	1,532,327
YMCA of Columbia-Willamette	7,036,856
YWCA of Portland	2,472,355
YWCA of Vancouver	1,159,152

* Non-Member Agencies Discretionary Funded

APPENDIX D

D. List of Features of Fund-raising Software Questionnaire

Organization:_____Date:_____

	Must Have	Desired	Not Need
donor tracking			
pledge tracking			
demographic information			
gift tracking history			
online inquiry			
pledge documentation			
receipts			
reports			
predefined			
custom designed			
word processing interface			
pledge reminders acknowledgements			
accounting interface			
mailing lists			
mailing labels			
letters			
fund-raising			
utilities for data backup			
time management			
grant proposal tracking			

APPENDIX E

E. Interview Questions

Organization:_____Date:_____

1. How often does your organization do mailings for money?

2. Do you have a need to pull mailing lists by specific criteria, (i.e., age, last gift date, size or largest pledge, ...)

3. Do you have a need to pinpoint a specific group of people to target a message or appeal towards?

4. When creating mailing lists, do you have a need to use seasonal addresses?

5. Do you need to produce mailing labels?

6. Other?

APPENDIX F

F. Review of Fund-Raising Software and Their Features

Donor Manager

donor demographics
gift history
pledge tracking
gift tracking
word processing interface
accounting interface
data file export import
pledge acknowledgements
pledge reminders
reports

DonorMaster II

demographic information
gift history
pledge reminders
activity tracking
reports
gift processing
word processing link

DonorPerfect

donor record tracking
mailing lists
reports
pledge management
pledge reminders

DonorPro

pledge tracking
donor tracking
demographic information
duplicate detection
donor analysis
reports
word processing
export to accounting
pledge reminders
thank you letters

Fund-Master

tracks gifts
manages pledges
online inquiry
mailing labels
receipts
pledge documentation
word processing interface
accounting interface

Fund-raiser

membership tracking
gift management
pledge management
word processing link
renewal notices
letters
reports
pledge reminders

Data gathered from Fund Raising Management, October, 1991.

APPENDIX G

G. Field Structure of the Software Features Database

(Each page in this appendix is

a record in the database.)

Comptype: IBM
Donor: yes
Contrb: yes
Fundraise: no
Pledgedoc: yes
Pledgetrk: yes
Pledgerem: yes
Granttrk: no
Letters: yes
Reportspre: yes
Reportscus: yes
Wordprcs: yes
Maillst1: yes
Maillst2: yes
Maillst3: yes
Maillst4: yes
Maillbl: yes
Util: no
Onlineuse: yes
Demogrphc: no
Recpts: no
Accountg: no
Timemgmt: no
Software: DonorHelp

Comptype: IBM
Donor: yes
Contrb: yes
Fundraise: yes
Pledgedoc: yes
Pledgetrk: yes
Pledgerem: no
Granttrk: no
Letters: no
Reportspre: yes
Reportscus: yes
Wordprcs: yes
Maillst1: yes
Maillst2: yes
Maillst3: yes
Maillst4: yes
Maillbl: yes
Util: no
Onlineuse: yes
Demogrphc: yes
Recpts: no
Accountg: no
Timemgmt: no
Software: Echo Systems

Software Features Database

Comptype: IBM
Donor: yes
Contrb: yes
Fundraise: no
Pledgedoc: yes
Pledgetrk: yes
Pledgerem: yes
Granttrk: yes
Letters: no
Reportspre: yes
Reportscus: yes
Wordprcs: yes
Maillst1: yes
Maillst2: yes
Maillst3: yes
Maillst4: yes
Maillbl: yes
Util: yes
Onlineuse: no
Demogrphc: yes
Recpts: yes
Accountg: yes
Timemgmt: no
Software: PledgeMaker

Comptype: IBM
Donor: yes
Contrb: yes
Fundraise: no
Pledgedoc: yes
Pledgetrk: yes
Pledgerem: yes
Granttrk: yes
Letters: no
Reportspre: yes
Reportscus: yes
Wordprcs: yes
Maillst1: yes
Maillst2: yes
Maillst3: yes
Maillst4: yes
Maillbl: no
Util: no
Onlineuse: no
Demogrphc: yes
Recpts: yes
Accountg: yes
Timemgmt: yes
Software: FundRaiser

Software Features Database

Comptype: IBM
Donor: yes
Contrb: yes
Fundraise: no
Pledgedoc: yes
Pledgetrk: yes
Pledgerem: yes
Granttrk: no
Letters: yes
Reportspre: yes
Reportscus: yes
Wordprcs: yes
Maillst1: yes
Maillst2: yes
Maillst3: yes
Maillst4: yes
Maillbl: yes
Util: no
Onlineuse: yes
Demogrphc: no
Recpts: no
Accountg: no
Timemgmt: no
Software: FundHelper

Comptype: IBM
Donor: yes
Contrb: yes
Fundraise: yes
Pledgedoc: yes
Pledgetrk: yes
Pledgerem: no
Granttrk: no
Letters: no
Reportspre: yes
Reportscus: no
Wordprcs: yes
Maillst1: yes
Maillst2: yes
Maillst3: yes
Maillst4: yes
Maillbl: yes
Util: yes
Onlineuse: yes
Demogrphc: yes
Recpts: no
Accountg: yes
Timemgmt: yes
Software: Fund Manager

Comptype: MAC
Donor: yes
Contrb: yes
Fundraise: yes
Pledgedoc: yes
Pledgetrk: yes
Pledgerem: no
Granttrk: no
Letters: yes
Reportspre: yes
Reportscus: yes
Wordprcs: yes
Maillst1: yes
Maillst2: yes
Maillst3: yes
Maillst4: no
Maillbl: yes
Util: no
Onlineuse: yes
Demogrphc: yes
Recpts: no
Accountg: yes
Timemgmt: no
Software: MacFund

APPENDIX H

H. Field Structure of the Software Description Database

(Each page in this appendix contains

2 records of the database.)

Software Description Database

Softname: DonorHelp
Softdesc1:
This software is used primarily for donor tracking and contribution
Softdesc2:
tracking. It is designed for development professionals. Also gives
Softdesc3:
immediate access to donor and prospect information. Maintains statistics.
Price: 275.00
Mfg: Software Specialties
Refer1: YWCA - OR
Refer1tel: 503 223-6281
Refer2: Albertine Kerr Center - OR
Refer2tel: 503 226-5432
Refer3: Vancouver ARC - WA
Refer3tel: 206 867-5743

Softname: DonorSoft
Softdesc1:
DonorSoft manages all components of development program. It lets you
Softdesc2:
create personalized letters, generate reports and easily manage a memorial
Softdesc3:
program.
Price: 130.00
Mfg: UserStuff, Inc.
Refer1: Children's Club - OR
Refer1tel: 503 635-3478
Refer2: Friendly House - PA
Refer2tel: 814 457-9054
Refer3:
Refer3tel:

Software Description Database

Softname: PledgeMaker
Softdesc1:
PledgeMaker is used for the tracking, documenting and acknowledging of
Softdesc2:
pledges. It is good for organizations who use the pledge process as a
Softdesc3:
prime source of revenue. Is for the smaller organization.
Price: 230.00
Mfg: SOFTREK, Inc.
Refer1: Jewish Family and Child Svcs. - CA
Refer1tel: 805 245-7654
Refer2: Seattle Boys and Girls Society - WA
Refer2tel: 206 764-5432
Refer3: Oregon Donor Program - OR
Refer3tel: 503 221-6748

Softname: FundRaiser
Softdesc1:
FundRaiser has the capabilities to perform endowment reporting, target
Softdesc2:
marketing and volunteer tracking. It was developed by non-profits. The
Softdesc3:
system is strong on pledge maintenance.
Price: 345.00
Mfg: Federated Software
Refer1: Sabin Day Care Center - WA
Refer1tel: 509 432-8594
Refer2: Planned Parenthood - OR
Refer2tel: 503 683-9531
Refer3:
Refer3tel:

Software Description Database

Softname: FundHelper
Softdesc1:
This software has excellent donor tracking capabilities. It is a good
Softdesc2:
match for a growing non-profit. It is menu driven and very user friendly.
Softdesc3:
The files created are compatible with many other software packages.
Price: 500.00
Mfg: MCS, Corp.
Refer1: Providence Child Center - OR
Refer1tel: 503 231-8874
Refer2: Salvation Army/Clark County - WA
Refer2tel: 206 684-5422
Refer3: VNA Home Health Care - IL
Refer3tel: 217 227-2826

Softname: FundManager
Softdesc1:
This software is used primarily for donor tracking and contribution
Softdesc2:
tracking. It is designed for the small organization. It is designed for
Softdesc3:
development professionals. The files created are compatible with WORD.
Price: 250.00
Mfg: Software Specialties
Refer1: Morrison Center - OR
Refer1tel: 503 224-4321
Refer2: Oregon Literacy - OR
Refer2tel: 503 774-8654
Refer3:
Refer3tel:

Software Description Database

Softname: DonorHelp-MAC
Softdesc1:
This MAC software is truly easy to use. It is very comprehensive. This is
Softdesc2:
a good system for small and new non-profits. Provides basic features at a
Softdesc3:
low cost. Excellent desktop publishig abilities.
Price: 100.00
Mfg: Commtact
Refer1: Mainstream Youth Program - CA
Refer1tel: 714 784-5634
Refer2: Mental Health Assn. - NE
Refer2tel: 402 422-9403
Refer3:
Refer3tel:

Softname: MacFund
Softdesc1:
This software has excellent donor tracking features. Wordprocessing
Softdesc2:
capabilities equal any system on the market. An excellent choice for small
Softdesc3:
and growing agencies.
Price: 259.00
Mfg: MAC-Software, Inc
Refer1: Lutheran Family Service - NE
Refer1tel: 402 335-9685
Refer2:
Refer2tel:
Refer3:
Refer3tel:

Software Description Database

Softname: MacFundraiser
Softdesc1:
MacFundraiser is extensive in fundraising activities. There are unlimited
Softdesc2:
targeting capabiities which allow user to selectively identify and isolate
Softdesc3:
segments of donor base.
Price: 495.00
Mfg: FundSoft
Refer1: Southwestern Children Services - CO
Refer1tel: 303 765-8699
Refer2: Sioux Children Services - NM
Refer2tel: 505 569-1123
Refer3:
Refer3tel:

Softname: HaveAll Software
Softdesc1:
HaveAll is a universal software package which can handle all needed
Softdesc2:
activities of an agency. The contribution tracking is extensive. This is
Softdesc3:
an excellent choice for new and small non-profits.
Price: 375.00
Mfg: DoneAll Software
Refer1: Chinese Social Service Center - CN
Refer1tel: 203 776-4839
Refer2:
Refer2tel:
Refer3:
Refer3tel:

Software Description Database

Softname: Universal Systems
Softdesc1:
Universal software manages trust accounting, endowments, and charitable
Softdesc2:
trusts. It is a very comprehensive and sophisticated software. Good for
Softdesc3:
small agencies.
Price: 236.00
Mfg: FundAll
Refer1: Camp Fire/Mt. Hood - OR
Refer1tel: 503 655-8695
Refer2:
Refer2tel:
Refer3:
Refer3tel:

Softname: Mastersystems
Softdesc1:
Mastersystems is ideal for large systems. It has report generator and
Softdesc2:
mailling list capabilities ar excellent. It keeps track of fund drive,
Softdesc3:
grants, programs and pledges. Graphic reports are a specialty.
Price: 995.00
Mfg: Heritage Systems
Refer1: Girl Scouts - Washington D.C.
Refer1tel: 202 657-6532
Refer2: ARC - Multnomah County - OR
Refer2tel: 503 224-9786
Refer3:
Refer3tel:

Software Description Database

Softname: Not-for-Profit Software
Softdesc1:
This software handles all areas of donor tracking. It is for the medium to
Softdesc2:
large agency. The desktop publishing capabilites are excellent.
Softdesc3:

Price: 765.00
Mfg: Impact Systems, Inc.
Refer1: Centro Cultural/Oregon - OR
Refer1tel: 503 648-0658
Refer2:
Refer2tel:
Refer3:
Refer3tel:

Softname: Echo Systems
Softdesc1:
Echo handles donor tracking and fundraising completely. This is a good
Softdesc2:
choice for the new organization. The mailling list features excellent and
Softdesc3:
letter writing feature is more than adequate.
Price: 99.00
Mfg: Advanced Systems
Refer1: Girl Scouts - OR
Refer1tel: 503 635-6531
Refer2: Catholic Community Service - MA
Refer2tel: 207 645-5393
Refer3:
Refer3tel:

APPENDIX I

I. Expert System Code

```
!     This system is designed to give recommendations to non-profit
!     organizations about software selections.  SSP queries the
!     user, asking for the desired features available in software.
!     In addition to the recommendation, the user can also request to
!     review a particular software package.

BKCOLOR=1;
RUNTIME;
ACTIONS
      CLS
      MOUSEOFF
      WOPEN 1,1,25,4,31,3
      WOPEN 2,6,1,13,76,7
      ACTIVE 1
      LOCATE 2,2
      DISPLAY "SOFTWARE SELECTION PROGRAM"
      ACTIVE 2
      DISPLAY "Welcome to the SOFTWARE SELECTION PROGRAM!!

This system will assist non-profit organizations
in the software selection process.

Please press any key to begin the selection process.~"
      CLS
!     Asks for non-profit organization name
      FIND nporg
      CLS

!     Queries for compute type and major features needed

      MENU comp_type, all, finaldla, comptype
      FIND comp_type
      CLS
      FIND dnr
      CLS
      FIND contr
      CLS
      FIND fund
      CLS
      FIND pledge_docu
      CLS
      FIND pledge_tracking
      CLS
      FIND pledge_remind
      CLS
      FIND grant_tracking
      CLS
```

```
!     Explanation to user of next queries

      DISPLAY "In addition to the major administrative functions of a
non-profit organization, there are office functions which
also need to be done.  These types of activities include
letter writing, creating reports, wordprocessing and the
producing of mailing lists and labels.

The next series of questions will be inquiring about the need
for features such as these and if they are needed by the {nporg}.

(Press any key to continue)~"

      CLS
      FIND lett
      CLS
      FIND rpts_predefined
      CLS
      FIND rpts_custom
      CLS
      FIND wordprc
      CLS
      FIND maillst
      CLS
      FIND mailanswr
      CLS
      FIND maillabel
      CLS
      FIND utility
      CLS
      FIND online
      CLS
      FIND demog
      CLS
      FIND receipts
      CLS
      FIND accounting
      CLS
      FIND time_mgt
      CLS

!     Selections made by user are shown for user's review

      CLS
      DISPLAY "
For review, listed below are the administrative features
and whether or not they were selected for the {nporg} software."
```

```
!     Multiple LOCATEs align the 2 column screen

      LOCATE 3,1

      DISPLAY "
      Donor_Tracking - {dnr}
      Gift/Contribution Tracking - {contr}
      Pledge Documentation - {pledge_docu}
      Pledge Tracking - {pledge_tracking}
      Pledge Reminders - {pledge_remind}
      Grant Proposal Tracking - {grant_tracking}"

      LOCATE 4,40
      DISPLAY "Receipts - {receipts}"
      LOCATE 5,40
      DISPLAY "Backup Utilities -{utility}"
      LOCATE 6,40
      DISPLAY "Online Inquiry -{online}"
      LOCATE 7,40
      DISPLAY "Demographic Information -{demog}"
      LOCATE 8,40
      DISPLAY "Time Management - {time_mgt}"
      LOCATE 9,40
      DISPLAY "Accounting Interface - {accounting}"

      LOCATE 11,1

      DISPLAY "To review other features selected,
      Press any key."

      CLS

      DISPLAY "

      These are the additional features to review."

      LOCATE 3,1

      DISPLAY "
       Letter_Production - {lett}
       Donor_Tracking - {dnr}
       Predefined Reports - {rpts_predefined}
       Custom Reports - {rpts_custom}"

      LOCATE 4,40
      DISPLAY "Fund_Raising - {fund}"
      LOCATE 5,40
      DISPLAY "Mailing Lists - {maillst}"
```

```
      LOCATE 6,40
      DISPLAY "Mailing Labels - {maillabel}"
      LOCATE 7,40
      DISPLAY "Word_Processing - {wordprc}"

      LOCATE 10,1

      DISPLAY "Press any key to continue."

!     Looking for features match in database, FINALD1A.

      WHILEKNOWN comptype
         GET     comp_type = comptype          AND
                 dnr = donor                   AND
                 contr = contrb                AND
                 fund = fundraise              AND
                 pledge_docu = pledgedoc       AND
                 pledge_tracking = pledgetrk   AND
                 pledge_remind = pledgerem     AND
                 grant_tracking = granttrk     AND
                 lett = letters                AND
                 rpts_predefined = reportspre  AND
                 rpts_custom = reportscus      AND
                 wordprc = wordprcs            AND
                 maillt1 = maillst1            AND
                 maillt2 = maillst2            AND
                 maillt3 = maillst3            AND
                 maillt4 = maillst4            AND
                 maillabel = maillbl           AND
                 utility = util                AND
                 online = onlineuse            AND
                 demog = demogrphc             AND
                 receipts = recpts             AND
                 accounting = accountg         AND
                 time_mgt = timemgmt,
                 finald1a,all

         FIND chkfound
         RESET message
         FIND message
END

!     Asks if user wishes to read a description of a software package

      CLS
      FIND review_software
      CLS
      FIND soft_answer
```

```
     DISPLAY "Thank you for using Software Selection Process.

If you wish to continue with the selection process,
press any key and then press G.

Otherwise, press any key and then press Q.~";

!    Formats display for found or not found software

RULE 1
IF   comptype <> UNKNOWN
THEN message = displayed
     CLS
     DISPLAY "{found_msg} {software} software for {nporg}.

To check for any additional recommendations, press any key.~"
CLS
ELSE message = none
     FIND msgs
     CLS
     DISPLAY "{found_msg}.

Press any key to continue~";

!    Determines which message to display

RULE 2
IF   software = UNKNOWN
THEN chkfound = nomatch
     found_msg = SSP_is_unable_to_make_a_recommendation
ELSE chkfound = yesmatch
     found_msg = The_SSP_system_recommends;

!    Message to be displayed is previous recommendations made

RULE 3
IF   chkfound = yesmatch
THEN msgs = donebefore
     found_msg = No_more_recommendations_are_available;

!    Displays software descriptions, when requested after run

RULE 4
IF   softname <> UNKNOWN
THEN softmsg = displayed
     CLS
     DISPLAY "{softname}
```

```
{softdesc1}
{softdesc2}
{softdesc3}
Approx. Price: ${price}          Developer: {mfg}.

References:
{refer1}
{refer2}
{refer3}"

LOCATE 8,40
DISPLAY "{refer1tel}"

LOCATE 9,40
DISPLAY "{refer2tel}"

LOCATE 10,40
DISPLAY "{refer3tel}"

LOCATE 11,8
DISPLAY "Press any key to continue."

     CLS
ELSE softmsg = none;

!    Asks which software description user wishes to review

RULE 5
If   review_software = yes
THEN soft_answer = yes
     MENU softinfo, all, finald2a, softname
     FIND softinfo
     CLS
     WHILEKNOWN softname
         GET softinfo = softname, finald2a, all
         RESET softmsg
         FIND softmsg
     END
ELSE soft_answer = no;

!    Asks specific questions for mail list feature

RULE 6
IF   maillst = yes
THEN mailanswr = yes
     FIND mailltl
     CLS
```

```
     FIND maillt2
     CLS
     FIND maillt3
     CLS
     FIND maillt4
ELSE mailanswr = no;


ASK nporg: "What is the name of the non-profit organization requesting
this recommendation?";

ASK comp_type: "Organizations have a variety of PC equipment installed
their offices.  Software is designed to run on specific types of
machines, so it is necessary to determine this office's PC system.

What type of computer system does your organization have?";

ASK dnr: "Donor tracking software is useful in maintaining information
about an organization's donors.

This information includes financial status, donor donations
habits, and past contributions to the organization.

Does the {nporg} have need to do donor tracking?";

CHOICES dnr: Yes,No;


ASK contr: "The keeping track of gifts and contributions can become la
and it may be necessary to use a computer to manage this function.

Gift tracking features can assist with this task and save
administrative time.

Is the organization in need of the gift and contribution tracking feat

CHOICES contr: Yes,No;


ASK fund: "Some organizations handle their own fund raising acitivitie
such as fun runs, walk-a-thons and auctions.  When there are lots
of people who participate there may be a need to keep track of this
information, either for further billings, mailings or future
event advertising.

If the {nporg} does manage their own fund raising events,
are you interested in the fund raising feature?";
```

```
CHOICES fund: Yes,No;


ASK pledge_docu: "Some organizations use pledges as a source of revenu
The process of maintaining accurate pledge records can
be very time consuming.

Is maintaining pledge documentation needed or desired at the {nporg}?"

CHOICES pledge_docu: Yes,No;


ASK pledge_tracking: "Pledge tracking is a functions which maintains d
each donor's pledge, how much is pledged for each period
of time and can keep track of this information for the
group as a whole.

Do you have a need for pledge tracking?";

CHOICES pledge_tracking: Yes,No;


ASK pledge_remind: "Pledge reminders are yet another part of the pledg
process. Reminders can be sent to the pledge makers to
help insure they do not forget to keep their pledge.

Software can assist in this process by automatically
creating reminders based upon the due date in the file.

Are pledge reminders a feature you would find necessary or desired?";

CHOICES pledge_remind: Yes,No;


ASK grant_tracking: "Tracking grant proposals and grant awards can be
to an organization.  Not only can proposal data be kept in an
automated environment, but the critical closing dates of the
foundations are available instantly.

Is grant proposal tracking a feature the {nporg} would find useful?";

CHOICES grant_tracking: Yes,No;


ASK lett: "Some organizations have a large volume of letters which are
written and mailed to various other organizations and individuals.
This process is cumbersome and very time consuming.
```

```
Does the {nporg} have a need for a mechanized way of producing large
volumes of letters?";

CHOICES lett: Yes,No;


ASK rpts_predefined: "Reports are the mainstay of many non-profit orga
Potential donors and Boards of Directors alike rely on data
found in these reports.  Reports can be time consuming to
create manually, yet a necessity to any organization.

A common feature in software is the pre-defined reports that come
with the system.  These are reports which produce information
commonly used by non-profit organizations such as pledge activity,
projected income, membership status and donor trends.

Are pre-defined reports something your organization would use?";

CHOICES rpts_predefined: Yes,No;


ASK rpts_custom: "Reports can also be tailored for your organization.
They can be designed to fit your particular needs and
requirments.  This feature gives additional flexibility
to the report creation process.

Are custom reports useful to the {nporg}?";

CHOICES rpts_custom: Yes,No;


ASK wordprc: "Wordprocessing allows quick and simple creation of corre
Each letter can be personalized, yet reproduced quickly.
Various letter formats are available, spelling is checked
and text can easily be created or rearranged.

Some organizations do not have a seperate wordprocessor available.

If this is the case,
would you like this feature present in the fundraising software?";

CHOICES wordprc: Yes,No;


ASK maillst: "Creating mailing lists is an easy task, but very time
consuming.  For a non-profit organization it is a task
that is done over and over again.
```

```
Would you like the task of creating mailing lists to be
done by your computer system?";

CHOICES maillst: Yes,No;


ASK maillabel: "Mailing labels can be used to make the mailing process
easier.  The labels can be used for solicitaion, newsletters,
personal letters and thank yous, to name a few.

Does the {nporg} perform lots of mailings and have a need for labels
to be produced?";

CHOICES maillabel: Yes,No;


ASK utility: "Utilities are available to backup the databases.

These utilities eliminate the need for system commands.

Would utilities such as these be useful?";

CHOICES utility: Yes,No;


ASK online: "Online inquiry is the capability to search the databases
specific information and have that information displayed upon the
computer screen.  This eliminates the need to look through printed
reports and allows easy and quick access to all of your data.

Do you have a need to retreive information from your databases in
this manner?";

CHOICES online: Yes,No;


ASK demog: "Demographic information will allow you to gather statistic
donors.  This data can include statistics, listing the donors by
amounts received over a specific period of time or by geographic
area or numerous other user defined criteria.

This data is useful when designing campaigns or fundraising events.

Does the {nporg} have a need to use this type of information?";

CHOICES demog: Yes,No;
```

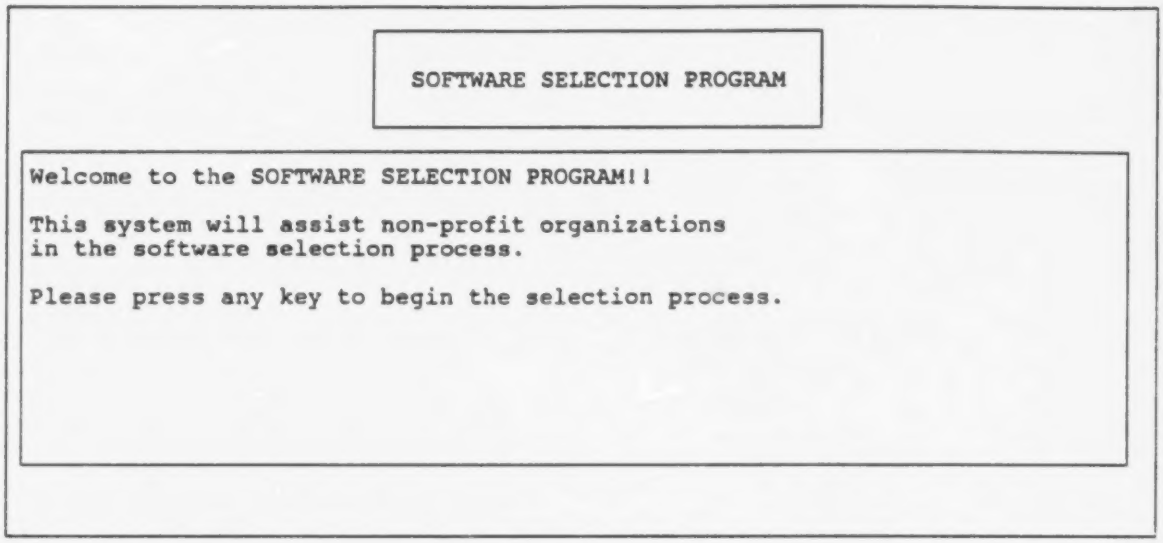
```
ASK receipts: "When donations are received some organizations choose t
issue receipts.  This can be a cumbersome task if these are
done by hand.  Software is available which will automatically
create a receipt when a donation is entered into the system.

Could the {nporg} use a feature which will generate receipts?";

CHOICES receipts: Yes,No;


ASK accounting: "Interfacing with an accounting system can be useful t
organization.  When entries are entered into a database, accounting
information can be exported to systems which maintain financial record

Would your organization have a need to transfer accounting
information from your donor database to an accounting system,
such as Lotus 1-2-3?";

CHOICES accounting: Yes,No;


ASK time_mgt: "Time management allows the recording of future meetings
appointments, dinners or whatever.  When the date arrives the system
will display a reminder on a daily to-do list.  Time management also
includes a calendar system for past, present and future years.

Is the time-management feature one that is needed by {nporg}?";

CHOICES time_mgt: Yes,No;


ASK softinfo: "In order to learn more about a specific software packag
indicate below which one you wish to review.

";

ASK review_software: "Would you like to learn more about a specific
software package?
";

CHOICES review_software: Yes, No;


ASK mailltl: "Do you have a need to pull mailing lists by specific
criteria, (i.e., age of donor, last gift date, size of donation, etc..

CHOICES mailltl: Yes,No;
```

```
ASK maillt2: "Do you have a need to pinpoint a specific group of
people to target a nessage or appeal towards?";

CHOICES maillt2: Yes,No;


ASK maillt3: "Does {nporg} have the capability to print envelopes on
a laser print?";

CHOICES maillt3: Yes,No;


ASK maillt4: "Does {nporg} use or wish to use the postal bar codes for
bulk mailing?";

CHOICES maillt4: Yes,No;
```

APPENDIX J

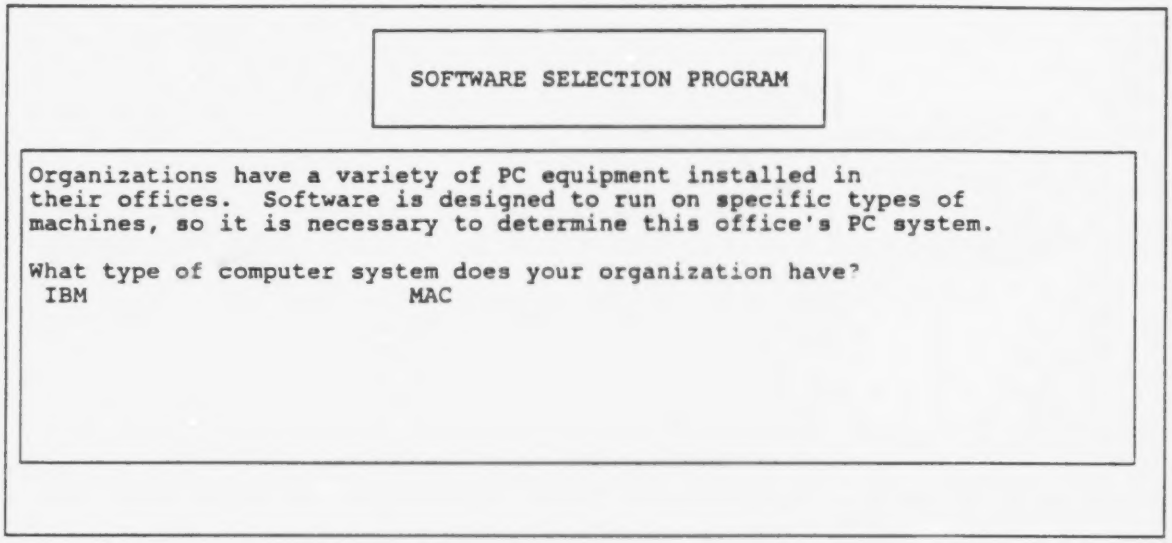
J. Expert System Dialog

(Each page of this appendix is a screen the user is presented while using the selection process.)


SOFTWARE SELECTION PROGRAM
Welcome to the SOFTWARE SELECTION PROGRAM!!
This system will assist non-profit organizations
in the software selection process.
Please press any key to begin the selection process.

SOFTWARE SELECTION PROGRAM

What is the name of the non-profit organization requesting this recommendation?


SOFTWARE SELECTION PROGRAM
Organizations have a variety of PC equipment installed in their offices. Software is designed to run on specific types of machines, so it is necessary to determine this office's PC system.
What type of computer system does your organization have?
IBM
MAC

101

SOFTWARE SELECTION PROGRAM

Donor tracking software is useful in maintaining information about an organization's donors.

This information includes financial status, donor donations habits, and past contributions to the organization.

Does the YWCA have need to do donor tracking?

Yes No

SOFTWARE SELECTION PROGRAM

The keeping track of gifts and contributions can become laborious and it may be necessary to use a computer to manage this function.

Gift tracking features can assist with this task and save administrative time.

Is the organization in need of the gift and contribution tracking feature?
Yes No

SOFTWARE SELECTION PROGRAM

Some organizations handle their own fund raising acitivities, such as fun runs, walk-a-thons and auctions. When there are lots of people who participate there may be a need to keep track of this information, either for further billings, mailings or future event advertising.

If the YWCA does manage their own fund raising events, are you interested in the fund raising feature?

Yes No

SOFTWARE SELECTION PROGRAM

Some organizations use pledges as a source of revenue.
The process of maintaining accurate pledge records can
be very time consuming.

Is maintaining pledge documentation needed or desired at the YWCA?
Yes No

SOFTWARE SELECTION PROGRAM

Pledge tracking is a functions which maintains data about each donor's pledge, how much is pledged for each period of time and can keep track of this information for the group as a whole.

Do you have a need for pledge tracking?
Yes No

SOFTWARE SELECTION PROGRAM

Pledge reminders are yet another part of the pledge process. Reminders can be sent to the pledge makers to help insure they do not forget to keep their pledge.

Software can assist in this process by automatically creating reminders based upon the due date in the file.

Are pledge reminders a feature you would find necessary or desired?
Yes No

SOFTWARE SELECTION PROGRAM

Tracking grant proposals and grant awards can be beneficial to an organization. Not only can proposal data be kept in an automated environment, but the critical closing dates of the foundations are available instantly.

Is grant proposal tracking a feature the YWCA would find useful?
Yes No

SOFTWARE SELECTION PROGRAM

In addition to the major administrative functions of a non-profit organization, there are office functions which also need to be done. These types of activities include letter writing, creating reports, wordprocessing and the producing of mailing lists and labels.

The next series of questions will be inquiring about the need for features such as these and if they are needed by the YWCA.

(Press any key to continue)

SOFTWARE SELECTION PROGRAM

Some organizations have a large volume of letters which are written and mailed to various other organizations and individuals. This process is cumbersome and very time consuming.

Does the YWCA have a need for a mechanized way of producing large volumes of letters?

Yes No

SOFTWARE SELECTION PROGRAM

Reports are the mainstay of many non-profit organizations. Potential donors and Boards of Directors alike rely on data found in these reports. Reports can be time consuming to create manually, yet a necessity to any organization.

A common feature in software is the pre-defined reports that come with the system. These are reports which produce information commonly used by non-profit organizations such as pledge activity, projected income, membership status and donor trends.

Are pre-defined reports something your organization would use?
Yes No

III

SOFTWARE SELECTION PROGRAM

Reports can also be tailored for your organization. They can be designed to fit your particular needs and requirments. This feature gives additional flexibility to the report creation process.

Are custom reports useful to the YWCA?

Yes No

SOFTWARE SELECTION PROGRAM

Wordprocessing allows quick and simple creation of correspondence.
Each letter can be personalized, yet reproduced quickly.
Various letter formats are available, spelling is checked
and text can easily be created or rearranged.

Some organizations do not have a seperate wordprocessor available.

If this is the case,
would you like this feature present in the fundraising software?
Yes No

SOFTWARE SELECTION PROGRAM

Creating mailing lists is an easy task, but very time consuming. For a non-profit organization it is a task that is done over and over again.

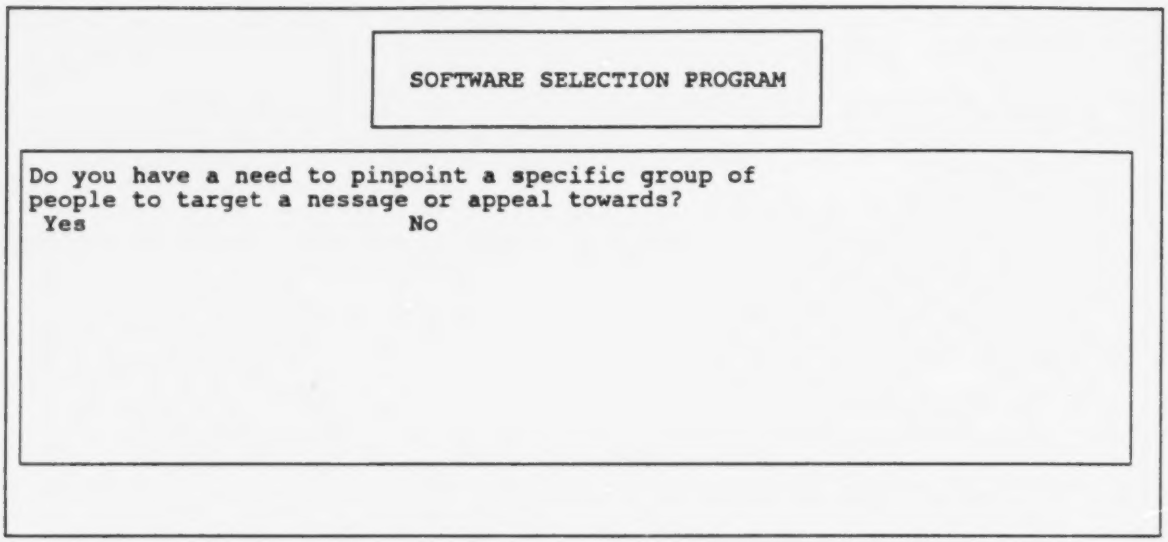
Would you like the task of creating mailing lists to be done by your computer system?

Yes No

SOFTWARE SELECTION PROGRAM

Do you have a need to pull mailing lists by specific criteria, (i.e., age of donor, last gift date, size of donation, etc..)?

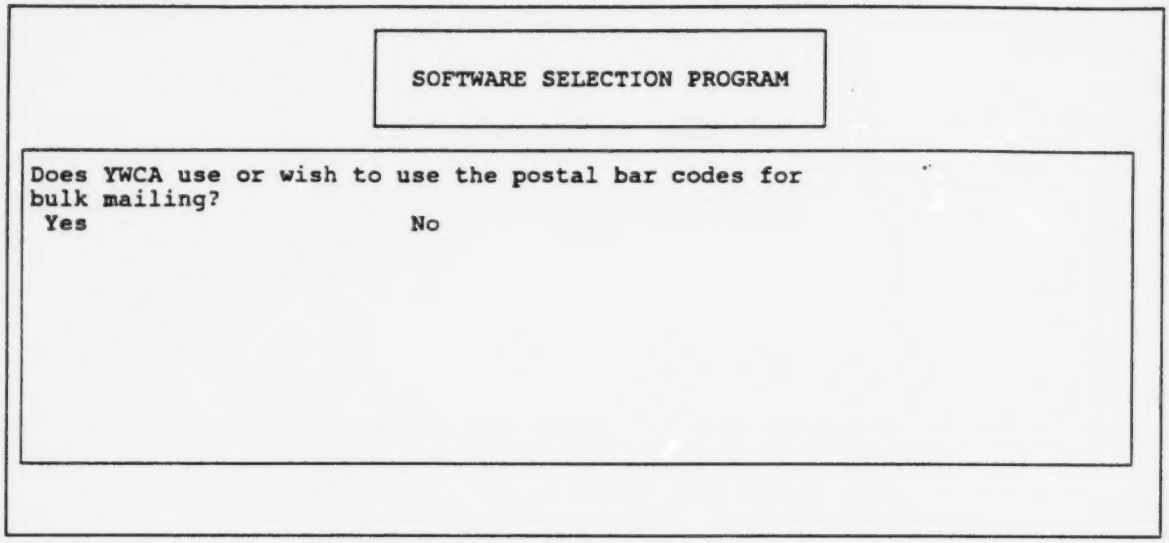
Yes No


SOFTWARE SELECTION PROGRAM
Do you have a need to pinpoint a specific group of
people to target a nessage or appeal towards?
Yes
No

SOFTWARE SELECTION PROGRAM

Does YWCA have the capability to print envelopes on a laser print?

Yes No

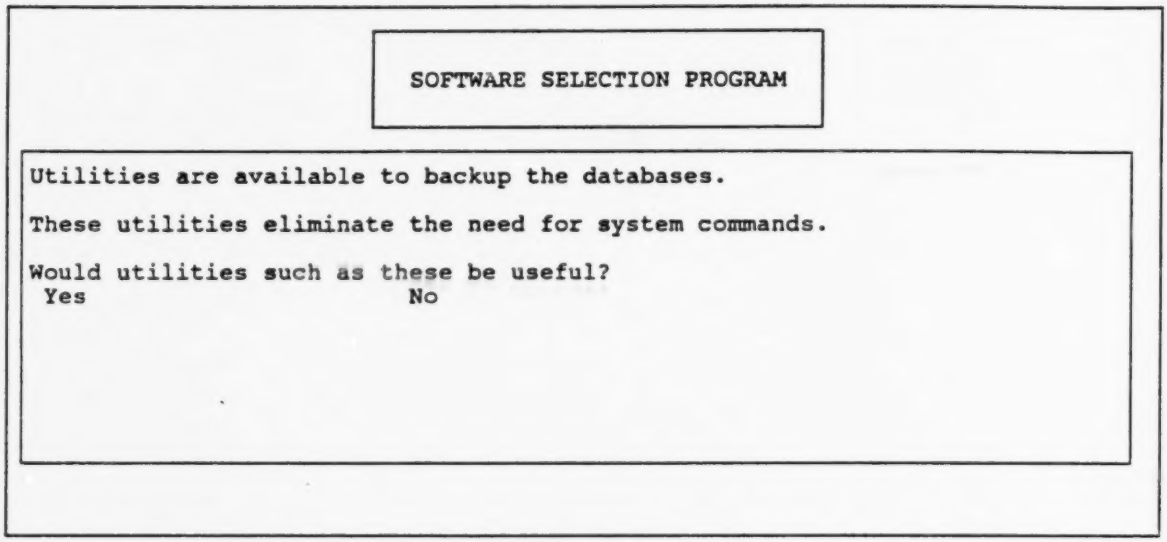

SOFTWARE SELECTION PROGRAM
Does YWCA use or wish to use the postal bar codes for bulk mailing?
Yes
No

SOFTWARE SELECTION PROGRAM

Mailing labels can be used to make the mailing process easier. The labels can be used for solicitaion, newsletters, personal letters and thank yous, to name a few.

Does the YWCA perform lots of mailings and have a need for labels to be produced?

Yes No


SOFTWARE SELECTION PROGRAM
Utilities are available to backup the databases.
These utilities eliminate the need for system commands.
Would utilities such as these be useful?
Yes
No

SOFTWARE SELECTION PROGRAM

Online inquiry is the capability to search the databases for specific information and have that information displayed upon the computer screen. This eliminates the need to look through printed reports and allows easy and quick access to all of your data.

Do you have a need to retreive information from your databases in this manner?

Yes No

SOFTWARE SELECTION PROGRAM

Demographic information will allow you to gather statistics on donors. This data can include statistics, listing the donors by amounts received over a specific period of time or by geographic area or numerous other user defined criteria.

This data is useful when designing campaigns or fundraising events.

Does the YWCA have a need to use this type of information?
Yes No

SOFTWARE SELECTION PROGRAM

When donations are received some organizations choose to issue receipts. This can be a cumbersome task if these are done by hand. Software is available which will automatically create a receipt when a donation is entered into the system.

Could the YWCA use a feature which will generate receipts?

Yes No

SOFTWARE SELECTION PROGRAM

Interfacing with an accounting system can be useful to an organization. When entries are entered into a database, accounting information can be exported to systems which maintain financial records.

Would your organization have a need to transfer accounting information from your donor database to an accounting system, such as Lotus 1-2-3?

Yes No

SOFTWARE SELECTION PROGRAM

Time management allows the recording of future meetings, appointments, dinners or whatever. When the date arrives the system will display a reminder on a daily to-do list. Time management also includes a calendar system for past, present and future years.

Is the time-management feature one that is needed by YWCA?
Yes No

SOFTWARE SELECTION PROGRAM

For review, listed below are the administrative features
and whether or not they were selected for the YWCA software.

Donor Tracking - Yes	Receipts - No
Gift/Contribution Tracking - Yes	Backup Utilities -No
Pledge Documentation - Yes	Online Inquiry -Yes
Pledge Tracking - Yes	Demographic Information -No
Pledge Reminders - Yes	Time Management - No
Grant Proposal Tracking - No	Accounting Interface - No

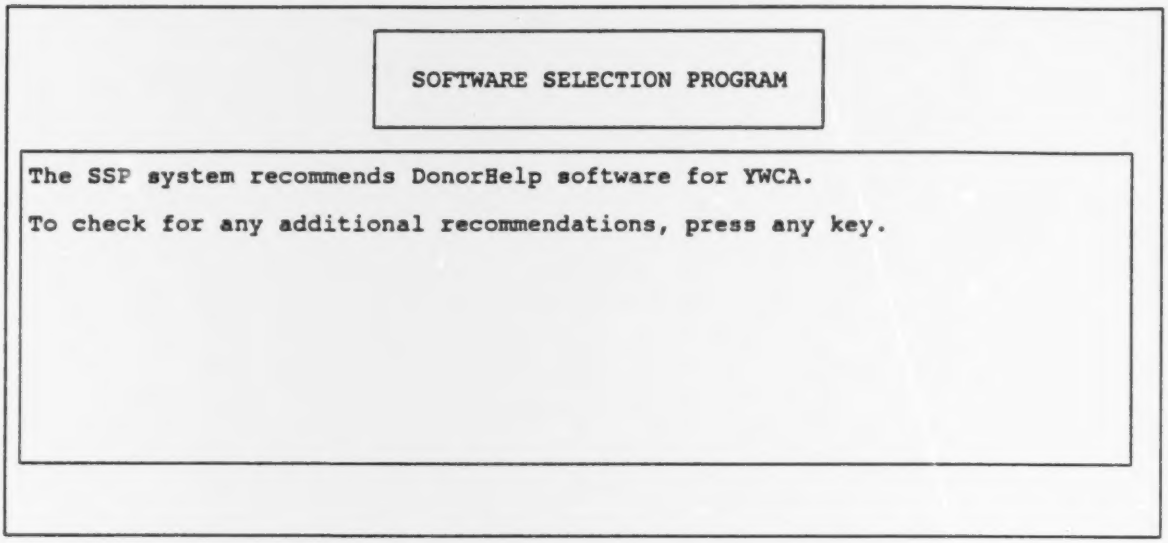
To review other features selected,
Press any key.

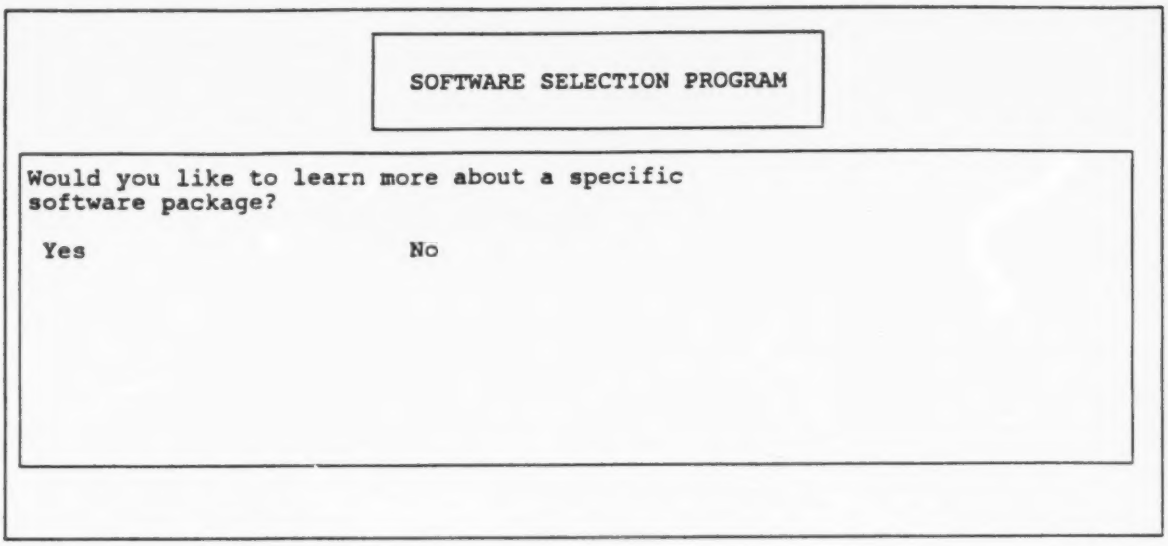
SOFTWARE SELECTION PROGRAM

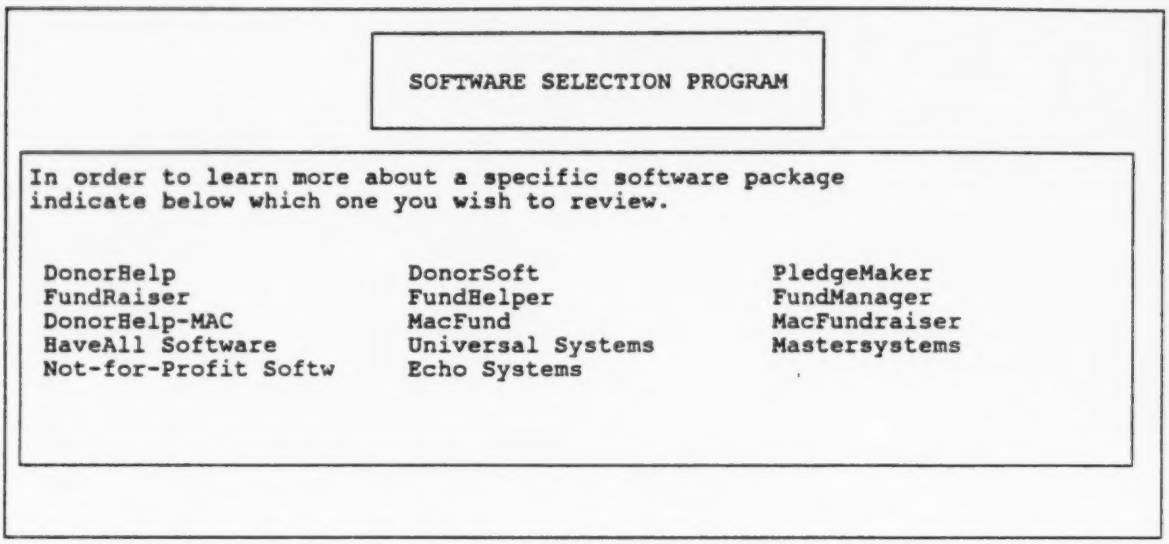
These are the additional features to review.

Letter Production - Yes	Fund Raising - No
Donor Tracking - Yes	Mailing Lists - Yes
Predefined Reports - Yes	Mailing Labels - Yes
Custom Reports - Yes	Word Processing - Yes

Press any key to continue.


SOFTWARE SELECTION PROGRAM
The SSP system recommends DonorHelp software for YWCA.
To check for any additional recommendations, press any key.


SOFTWARE SELECTION PROGRAM
Would you like to learn more about a specific software package?
Yes
No


SOFTWARE SELECTION PROGRAM
In order to learn more about a specific software package
indicate below which one you wish to review.
DonorHelp
FundRaiser
DonorHelp-MAC
HaveAll Software
Not-for-Profit Softw
DonorSoft
FundHelper
MacFund
Universal Systems
Echo Systems
PledgeMaker
FundManager
MacFundraiser
Mastersystems

SOFTWARE SELECTION PROGRAM

FundRaiser

FundRaiser has the capabilities to perform endowment reporting, target marketing and volunteer tracking. It was developed by non-profits. The system is strong on pledge maintenance.
Approx. Price: $345.00 Developer: Federated Software.

References:
Sabin Day Care Center - WA 509 432-8594
Planned Parenthood - OR 503 683-9531

Press any key to continue.

SOFTWARE SELECTION PROGRAM

Thank you for using Software Selection Process.

If you wish to continue with the selection process,
press any key and then press G.

Otherwise, press any key and then press Q.

Definition of Terms

Acknowledgement - an expression of gratitude for a gift or service, most often in letter form.

Annual Campaign - Any organized effort by a gift-supported organization to obtain gifts on a yearly basis, usually to support in part or totally general operations.

Birthday Campaign - a fund-raising campaign centered around an anniversary date of an organization on the premise that the occasion will stimulate special "birthday" gifts.

Benefit - a special event for charitable purposes, with all proceeds above expenses designated as a contribution to one or more causes.

Disabilities Services - non-profit organizations which provide training for independent living, homemaker services and early intervention to mentally and physically disabled individuals and their families.

Domain Expert - the knowledge source(s) for an expert system

Donor Classification - the categorization of contributors according to the amount of previous gifts.

Donor List - a list of contributors prepared for a particular purpose or in conjunction with list building.

Donor Profile - a description of basic information about an individual donor through research.

Donor Upgrade Report - a computer report showing the number of donors who have increased the size of their donations as a result of a particular appeal.

Five-O-One (C)(Three) - the section of the Internal Revenue Code that defines non-profit, charitable, educational, religious, scientific, and like tax-exempt organizations. A 501(c)(3) organization is one that is gift-supported and tax-exempt.

Fund-Raising - the seeking of gifts from various sources as conducted by 501(c)(3) organizations.

Fund-Raising Software - software designed to manage the money raising process of non-profit organizations. Features that may be present in these systems are database, mailing and pledge management, gift tracking, and word processing features.

Gift Records - current and cumulative records of contributions to an organization contained on cards or in files

Knowledge-Engineering - process of developing an expert system.

Mailing List - a list of names and addresses of people categorized according to one or more common interests used for mailing purposes and often computerized for quick availability.

Non-Profit Organization - an organization that is not conducted or maintained for the purpose of making a profit, must have 501(c)(3) status.

Pledge - a signed and dated legal commitment to make a gift over a specified period, generally three or more years, payable according to terms set by the donor; the total value of such a commitment.

Records - collective term for all files and lists pertaining to donors, non-donors, prospects, gift records, and miscellaneous records as maintained by a campaign or development office.

Social Services - Programs to help strengthen families and promote personal growth opportunities, healthy lifestyles, self-sufficiency and living skills for children, teens, adults and senior citizens.

Definitions from Glossary of Fund-Raising Terms,
Expert Systems for Business and Management, and the United Way brochure.

Bibliography

Adams-Chau, Linda Lee.

The Professionals' Guide to Fund Raising, Corporate Giving, and Philanthropy. New York: Quorum Books, 1988.

Bores, Jerry. Personal interview. YWCA. February 26, 1992.

Emmons, Susan. Personal interview. Northwest Pilot Project. March 13, 1992.

FundRaiser Software System sales brochure. West Islip, NY: Environmental Information Systems, 1991.

Gast, Susan. Telephone interview. United Way. February 12, 1992.

Gurin, Maurice G., What a Volunteer Should Know About Successful Fund-Raising. New York: Stein and Day, 1989.

Jones, David R., "Computing the Odds in Software". Foundation News. March April 1988: 60-64.

Lawson, Susan T., ed. Glossary of Fund-Raising Terms. Virginia: National Society of Fund Raising Executives Institute. 1986.

Liebowitz, Jay, ed., Expert Systems for Business and Management. New Jersey: Yourdon Press, 1990.

Love, Jay B. "Evaluating Fund-Raising Software". Fund-Raising Management. October, 1988: 46-50.

Mead, Marijo. Personal interview. YWCA. November 23, 1991.

Proffitt, Stuart. "Methods of Evaluating Computer Software Systems". Fund-Raising Management. May, 1985: 54-64.

Romano, William. "1991 Non-Profit Software Package Directory". Fund-Raising Management. Oct., 1991: 22-37.

Sandler, Cheryl D. "Computerizing the Small Development Office". Fund Raising Management. September, 1987: 101-105.

United Way brochure, Portland, OR: 1991.

Walton, David. "Choosing the Right Fund-Raising Software". Fund Raising Management. October, 1990: 26-30.

Weissman, Cheryl J. "The Second Time Around: Reaching for the Right Package". Fund-Raising Management. October, 1991: 68-69.

Witthams, Joan. Personal interview. Association for Retarded Citizens. March 6, 1992.

Wood, William C. "Selecting A Fund-Raising System (The Second Time Around)". Fund-Raising Management. October, 1990: 58-62.